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(54) Title: METHOD, APPARATUS, AND SYSTEM FOR FACILITATING TRANSACTIONS BETWEEN VENDORS AND PURCHASERS

(57) Abstract: A method, apparatus, system and machine-readable medium for facilitating and automating business transactions between multiple vendors and purchasers using a centralized system to which the multiple vendors and purchasers are connected via a computer network. In one embodiment, a catalog query function (323) is performed at the centralized system (301) to identify and display a list of part items in a first catalog that match the query criteria submitted by a first purchaser, a stock check function is performed by the centralized system (301) to inquire about prices and availability of the part items in the list that are selected by the first purchaser to be stock checked. A list of stock check responses received from the selected vendors is then displayed to the first purchaser. In response to an order placement request (327) submitted by the first purchaser, an order placement function is performed by the centralized system (301) to order the part items in the list of responses that are selected by the first purchaser to be ordered.

METHOD, APPARATUS, AND SYSTEM FOR FACILITATING
TRANSACTIONS BETWEEN VENDORS AND PURCHASERS

FIELD OF THE INVENTION

The present invention relates to the processing of information in a client-server

5   environment. More specifically, the present invention relates to an apparatus, method,
system, and machine-readable medium for facilitating commercial transactions between
vendors and purchasers of auto parts.

BACKGROUND OF THE INVENTION

10   Traditionally, vendors and purchasers of auto parts conduct their business
transactions via phone or other methods of manual communications and processing.
Vendors of auto parts may include wholesalers, distributors, retailers, or other business
entities engaging in the distribution and selling of auto parts. Purchasers of auto parts
may include automobile repair facilities, retailers, individuals, or other entities that have a

15   need to locate and order various auto parts for various purposes. Conventionally,
purchasers and vendors of auto parts perform various tasks manually to initiate and
process various commercial transactions pertaining to their businesses. Some of the
manual tasks performed by a typical purchaser may include searching through a paper
catalog to identify one or more specific part numbers and other information for one or

20   more parts needed to do a repair job (i.e., catalog query), searching through the paper
catalog or some paper directories to identify the particular vendors that carry the
required parts (catalog query), calling or faxing a request to the vendors to inquire about
the price and availability of the required parts (stock check), and calling the vendors to
place orders for the required parts, etc. Moreover, the typical purchaser described in the

25   above scenario may have to repeat those manual tasks several times before placing one or
more orders with one or more vendors. For example, the purchaser may have to look
through multiple paper catalogs to identify the part information and the vendors that
carry the required parts. In addition, if the purchaser wants to shop around to find better
prices or if the particular vendors initially contacted by the purchaser do not have the

30   required parts in stock, the purchaser may have to make several phone calls (or send
several faxes) to different vendors to inquire about the prices and availability of the

required parts, provided that the purchaser can figure out who to call. It is obvious from the above example that the manual tasks that a typical purchaser would need to perform to obtain the parts required to complete a repair job are not only tedious and time consuming but also inefficient and can easily result in processing errors which would cost

5 more time, money and customer satisfaction. For example, the purchaser may obtain a wrong part number from the paper catalog, may provide erroneous part information to the vendors who would in turn provide erroneous information back to the purchaser. In addition, each vendor may have different requirements/business practices/procedures with respect to various aspects of auto parts ordering and processing which would place

10 a heavy burden on the purchasers to conform to. For example, a purchaser who deals with two different vendors having different business practices and procedures may have to use or develop different forms and/or procedures in conducting business transactions with those two different vendors. Such a business operational environment is not only inefficient but also may create inconsistencies and more room for errors. For example,

15 wrong forms may be sent or faxed to wrong vendors, etc. Of course, the problems or issues facing the purchasers may also face the vendors on the other end. For example, a particular vendor may have to deal with numerous different purchasers who operate in different business environments using different procedures/practices. A typical vendor may also incorrectly process the information provided by the purchaser.

20   In some cases, some vendors and/or purchasers may have access to use some computer systems designed to assist the vendors and purchasers in conducting their business transactions. Even in these limited cases, the amount of work that need to be performed manually by both vendors and purchasers is still considerable. Moreover, since these small number of proprietary computer systems are designed to suit particular

25 needs of particular vendors and/or purchasers, they cannot operate across different business environments or across different technical platforms. Even if a purchaser in some special circumstances has access to use two or more computer systems to perform stock checks and order placements with two or more vendors, such access is still limited within the confines of those computer systems and the purchaser has no other automated

30 mechanism to perform concurrent, parallel inquiries about prices, availability of required parts or place multiple orders simultaneously.

There exists a need for a centralized system to which multiple vendors and purchasers can be connected to facilitate and automate business transactions between the multiple vendors and purchasers.

SUMMARY OF THE INVENTION

The present invention provides a method, apparatus, system and machine-readable medium for facilitating and automating business transactions between multiple vendors and purchasers using a centralized system to which the multiple vendors and purchasers are connected via a computer network. In one embodiment, a catalog query function is performed at the centralized system to identify and display a list of part items in a first catalog that match the query criteria submitted by a first purchaser. In response to a stock check request submitted by the first purchaser, a stock check function is performed by the centralized system to inquire about prices and availability of the part items in the list that are selected by the first purchaser to be stock checked. A list of stock check responses received from the selected vendors is then displayed to the first purchaser. In response to an order placement request submitted by the first purchaser, an order placement function is performed by the centralized system to order the part items in the list of responses that are selected by the first purchaser to be ordered.

BRIEF DESCRIPTION OF THE DRAWINGS

The features and advantages of the present invention will be more fully understood by reference to the accompanying drawings, in which:

Figure 1 is a block diagram of one embodiment of a system for facilitating and processing transactions between multiple purchasers and vendors of auto parts;

Figure 2 shows a more detailed block diagram of one embodiment of the system in Figure 1;

Figure 3 illustrates a functional block diagram of one embodiment of the system described in Figure 2;

Figure 4 shows a structure diagram of one embodiment of a transaction database according to the teachings of the present invention;

Figure 5 shows a tree-view diagram of one embodiment of the transaction database described in Figure 4;

5   **Figure 6** shows a table-view representation of the transaction database described in Figure 4;

Figure 7 shows a structure diagram of one embodiment of a message database in accordance with the teachings of the present invention;

Figure 8 shows a tree-view representation of one embodiment of the message

10   database;

Figure 9 is a table-view representation of one embodiment of the message database;

Figure 10 illustrates a block diagram of one embodiment of a vendor gateway according to the teachings of the present invention;

15   **Figure 11** shows a block diagram of a vendor response server interface;

Figure 12 shows a flow diagram of a sequence of events that take place in a typical transaction scenario between a purchaser and a vendor of auto parts;

Figure 13 shows a flow diagram of one embodiment of a method for facilitating and processing auto part transactions;

20   **Figure 14** is a flow diagram of one embodiment of a method for creating/updating a purchaser account and profile information;

Figures 15A-L show examples of various user interfaces that are used to create/update a purchaser account and profile information;

Figure 16 shows a flow diagram of one embodiment of a method for

25   creating/updating a vendor account and profile information;

Figures 17A-H shows examples of various user interfaces used to create/update a vendor account and profile information;

Figure 18 illustrates a flow diagram of one embodiment of a method for facilitating and automating new orders of auto parts;

30   **Figure 19** shows a flow diagram of one embodiment of a part query/search process;

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Figure 20 shows a flow diagram of one embodiment of a method for performing a part search based upon a part number and a manufacturer line code;

Figures 21A-N show examples of various user interfaces used in the part query/search process described in Figure 19;

5   **Figure 22** is a flow diagram of one embodiment of a method for performing a stock check function;

Figure 23 shows an example of a stock check results user interface;

Figure 24 is a more detailed flow diagram of one embodiment of a method for performing a stock check function;

10   **Figure 25** shows a flow diagram of one embodiment of a method for performing an order placement function;

Figure 26 is a detailed flow diagram of one embodiment of a method for performing an order placement function;

Figure 27 is a flow diagram of one embodiment of a method for providing job

15   status information to the users;

Figure 28A is an example of a job status summary user interface;

Figure 28B is an example of a user interface displaying detailed vendor information;

Figure 28C is an example of a user interface showing detailed order status

20   history;

Figure 29 is an example of a user interface showing detailed order status history;

Figure 30 shows an example of a user interface for job closing confirmation;

Figure 31 shows an example of a user interface for cost estimate;

Figure 32 shows an example of a user interface showing status of completed

25   jobs;

Figure 33 shows an example of a detailed order status history;

Figure 34 is an example of a return authorization request summary user interface;

Figure 35 illustrates a flow diagram of one embodiment of a process for providing order status history of an order;

30   **Figure 36** shows a detailed flow diagram of one embodiment of a process for performing a cancellation function;

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Figure 37 shows a detailed flow diagram of one embodiment of a method for performing a return function;

Figure 38 illustrates a flow diagram of one embodiment of a method for allowing the user to review and update status information;

5   **Figures 39A-B** show examples of various user interfaces used for updating status information;

Figure 40 is a flow diagram of one embodiment of a method for reporting transactional information to a user of the system;

Figures 41A-F show examples of various user interfaces used to report

10   transactional information to a user;

Figure 42 is a flow diagram of one embodiment of a process for allowing a vendor to view and take appropriate actions with respect to pending transactions;

Figures 43A-D show examples of various user interfaces used to review pending transactions;

15   **Figure 44** illustrates a flow diagram of a method for providing historical transactional information to a vendor;

Figures 45A-C show examples of various user interfaces used to provide historical transaction information to a vendor;

Figure 46 shows a flow diagram of one embodiment of a method for reporting

20   transactional information to a user; and

Figures 47A-G show examples of various user interfaces used to report transactional information to a user.

DETAILED DESCRIPTION

25   In the following detailed description numerous specific details are set forth in order to provide a thorough understanding of the present invention. However, it will be obvious to one skilled in the art that the present invention may be understood and practiced without these specific details.

In the discussion below, the teachings of the present invention are utilized to

30   implement a system to facilitate and automate various commercial transactions between vendors and purchasers of auto parts via a computer network. The system is designed

and configured to process different types of data requests and responses from the vendors and purchasers and to transmit various types of transactional information between the vendors and the purchasers. Transactional information processed and transmitted by the system include stock check requests submitted by the purchasers and

5   stock check responses generated by the vendors, part order requests submitted by purchasers and part order confirmations generated by vendors, order status requests submitted by purchasers and order status responses generated by vendors, cancellation requests and cancellation confirmations, return requests, return authorizations, and return confirmations etc. The system is configured to allow a purchaser to submit multiple

10   stock check requests and/or multiple order requests concurrently to multiple vendors. Purchasers and vendors can use the system to generate various types of reports containing information relating to their transactions. Purchasers and/or vendors can use the system to specify their business preferences including the specific business entities with whom they want to conduct business and the relative ranking among those business

15   entities. The teachings of the present invention are applicable to any business environment in which multiple purchasers and sellers wish to conduct their business transactions over a computer network. The present invention is not limited to the facilitating and processing of auto parts transactions and can be applied to other types of business transactions in other business areas or disciplines.

20   Figure 1 illustrates a block diagram of one embodiment of a system environment and configuration 100 for facilitating and processing transactions between multiple purchasers and vendors of auto parts. In this configuration, various business entities can be connected to a centralized processing system 101 via a computer network. In one embodiment, the computer network can be a

25   local area network (LAN), a wide area network (WAN), the Internet, or any combinations thereof. In one embodiment, the centralized system 101 is an Internet-based system designed to perform various functions to facilitate and process various types of transactions between multiple purchasers 105a-105c and multiple vendors 121a-121c. The various functions performed by centralized

30   system 101 include the processing of parts queries, stock check requests, order placement requests, order status and tracking requests, order cancellation

requests, return requests, etc. The processing of these various types of requests and/or functions is described in detail below.

Referring to Figure 1, in one embodiment, various purchasers 105a-105c can establish connections with the centralized system 101 via the Internet. The purchasers

5   105a-105c can submit various types of requests to the centralized system 101 and conduct various types of transactions with one or more vendors 121a-121c using the centralized system 101. As mentioned above, purchasers of auto parts 105a-105c may include automobile repair facilities, retailers, individuals, or other entities that have a need to locate and order various auto parts for various purposes. Vendors of auto parts 121a-

10   121c (also referred to as distributors herein) may include wholesalers, distributors, retailers, or other business entities engaging in the distribution and selling of auto parts. The centralized system 101 is designed to facilitate and process various types of business transactions between the purchasers 105a-105c and the vendors 121a-121c and perform other functions relating to their business transactions. The various processes

15   and functions performed by the centralized system 101 are described in detail below.

Continuing with the present discussion, one of the purchasers, for example purchaser 105a, can establish connection with the centralized system 101 via an Internet connection. The purchaser 105a can submit a part lookup or catalog query request to the centralized system 101 to locate one or more specific parts that are needed to perform a

20   repair job. The centralized system 101, upon receiving the catalog query request from the purchaser 105a, conducts a search of an electronic catalog and retrieves the part entries or items in the catalog that match the search criteria specified by the purchaser 105a. The centralized system 101 then sends the information retrieved from the catalog to the purchaser 105a. The purchaser 105a can select one or more specific parts to be

25   ·stock checked. In the present specification, the term "stock check" is used to refer to the inquiry about the availability and price of one or more specific parts. The purchaser 105a can submit a stock check request on the specific parts to one or more vendors selected by the purchaser 105a using the centralized system 101. Assuming in the current example that the purchaser 105a wishes to perform a stock check on the selected

30   parts with the vendors 121a and 121b. The centralized system 101, upon receiving the stock check request from the purchaser, performs a number of functions to be described

in more detail below to send the stock check request to both vendors 121a and 121b. In one embodiment, the stock check request is sent concurrently to both vendors 121a and 121b. The vendors 121a and 121b, after processing the stock check request submitted, send a response to each stock check request back to the purchaser 105a via the

5   centralized system 101. The centralized system 101, upon receiving the stock check response back from the vendors 121a and 121b, transmits the stock check response to the purchaser 105a. Similarly, the purchasers 105a-c and the vendors 121a-c can perform other types of transactions and functions to be described in more detail below using the centralized system 101.

10   In one embodiment, other entities can also be connected to the centralized system 101 to conduct various types of business transactions and functions. For example, auto part manufacturers 109a-109b can use the centralized system 101 to obtain statistical information concerning the buying and selling of certain auto parts to determine the marketability and desirability of those parts, etc. In addition, advertisers 113 can also

15   place advertisements using the centralized system 101. Other entities 117 can also use the centralized system 101 for various purposes including establishing business connection with certain vendors and/or purchasers, obtaining statistical and market information stored by the centralized system 101, etc.

Figure 2 shows a more detailed block diagram of one embodiment of the system

20   configuration 100 illustrated in Figure 1. For clarity and simplicity, the discussion is focused on the interactions between the purchasers 251, vendors 271 and the centralized system 201. However, everything discussed herein equally applies to other business entities in the auto parts processing as well as in other business environments. In one embodiment, the centralized system 201 facilitates various types of business

25   transactions including stock checks and order transactions between multiple purchasers 251 (e.g., repair shops) and multiple parts vendors or distributors 271. In one embodiment, the centralized system 201 is also configured to process various types of reporting functions desired by the purchasers and vendors with respect to their business transactions including transactional summary and detailed reports that are described in

30   more detail below. In one embodiment, the centralized system 201 is logically organized into three major subsystems or units: a market subsystem or unit 203, a transaction

database or unit 213, and a vendor gateway subsystem or unit 227. The market subsystem or unit 203, in one embodiment, contains one or more market servers 205, a catalog server 209, and a catalog 213 containing auto parts information. The transaction database subsystem or unit 215, in one embodiment, contains a database server 217, a

5   transaction database 221, and a database converter/translator 225. The vendor gateway subsystem or unit 227, in one embodiment, contains a database server 229, a message database 233, and a vendor system interface (VSI) component 237. These various system components of the centralized system 201 are described in further detail below.

Continuing with the present discussion, in one embodiment, the purchasers

10   251a-b (e.g., workshop technicians at repair shops) establish connection with the centralized system 201 via the Internet and access the various functions of the centralized system 201 using an Internet browser (also referred to as the client program). The purchasers 251a-b can establish connection with the centralized system 201 using a router, a dial-up modem, or other methods of Internet connections available to them. The

15   purchasers 251a-b can utilize an Internet browser to interface with the centralized system in order to access the various functions and features of the centralized system 201 including catalog query, stock check or quotes, order placement, order management, returns and profiles management, etc. In one embodiment, the purchasers 251a-b can also use the browser client program to communicate via voice and/or video with parts

20   vendors and other purchasers (e.g., repair shops). In one embodiment, the centralized system 201 is designed to support both Microsoft® INTERNET EXPLORER® and Netscape® NAVIGATOR® browser software.

Parts vendors 271a-c (also referred to as distributors or suppliers), in one embodiment, establish connection with the centralized system 201 via the Internet. The

25   vendors 271a-c can establish connection with the centralized system 201 using routers, dial-up modems or other methods of Internet connections available to them. In one embodiment, the vendors 271a-c use an Internet browser to access the centralized system 201 to perform various functions including establishing the profile of their businesses and generating various types of transaction reports, etc. They can also use the browser to

30   optionally review quote and order information and communicate with the purchasers

251a-b and other vendors. The various functions performed by the centralized system 201 in response to various requests by the vendors 271a-c are described in detail below.

Referring again to Figure 2, in one embodiment, the market server 205 is a primary web application server that provides the system interface between the

5   purchasers 251, the vendors 271, and the centralized system 201. In one embodiment, the market server 205 is a web application server built on an underlying framework using Microsoft Active Server Pages, Microsoft COM objects and stored procedures in the database. In one embodiment, Active Server Pages (ASP) is an extension of Microsoft IIS web server using the ISAPI interface. In one embodiment, ASP provides both server-side

10   scripting using Visual Basic Script and client-side scripting using Java Script. ASP can access Microsoft COM objects. In one embodiment, Microsoft's Visual InterDev is used to create ASP code. In one embodiment, Microsoft's Visual C++ and Microsoft's Visual Basic is used to create COM objects. In one embodiment, database stored procedures are created using a text editor and are compiled using the database stored

15   procedure compiler.

In one embodiment, the catalog server 209 is coupled to a catalog storage device 213 that contains parts information. The catalog storage device 213 can be any type of storage medium including but is not limited to disks, tapes, etc. In one embodiment, the catalog server 209 is a high performance indexed file system provided by MacDonald

20   Computer Systems of Valencia, California. In one embodiment, the catalog 213 provides auto parts content from many manufactures and is customized for the automotive industry.

In one embodiment, the transaction database 221 is configured to store customer profile information (e.g., information of purchasers and vendors) and transaction

25   information (e.g., information relating to business transactions between purchasers and vendors). The information stored in the transaction database 221 includes purchaser profiles and vendor profiles; catalog query results, stock check results, order information, cancellation information, return information, delivery information, etc. The transaction database 221 can be any type of storage medium including disk, tape, etc. In one

30   embodiment, the transaction database 221 is configured as a relational database containing

a set of various tables used to store various types of customer profile and transaction information as described above. However, the teachings of the present invention are not limited to relational database structures and can equally apply to any other database or file structures including flat file structure, indexed file structure, hierarchical database

5   structure, networked database structure, or combinations thereof, etc.

The database converter/translator 225, in one embodiment, functions as an interface between the transaction database 221 and the vendor gateway 227. In one embodiment, the database converter 225 scans the transaction database 221 for new transaction requests (e.g., new stock check requests), creates appropriate request

10   messages (e.g., stock check request messages) in the message database 223, scans the message database 223 for responses or confirmations (e.g., stock check response messages), and updates the transaction database 221 with the response or confirmation information retrieved from the message database 223. The structure and functions of the database converter 225 are described in more detail below.

15   The vendor gateway 227, in one embodiment, functions as an interface between the centralized system 201 and the vendors 271. As described above, the vendor gateway 227, in one embodiment, includes the message database 233 and a vendor system interface (VSI) 237. In one embodiment, the message database 233 is configured to store a set of various tables containing transaction information of various types of

20   transactions including order information, stock check information, etc. The structure of the message database 233 is described in more detail below. The vendor system interface (VSI) 237 contains logic for transmitting transaction information to and receiving transaction information from the various computer systems that are used by the vendors 271 to process their transactions. In one embodiment, the vendor system interface 237,

25   utilizing various types of communications methods to be described in more detail below, transmits various types of transaction requests (e.g., stock check requests) to the systems of the vendors 271 based on the information retrieved from the message database 233, receives the transaction responses or confirmations (e.g., stock check responses) from the vendors' systems, and updates the message database 233 with the

30   responses or confirmations received from the vendors' systems. The operations and functions performed by the vendor system interface (VSI) 237 in order to transmit

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transaction information to and receive transaction information from the vendors' systems are described in greater detail below. The vendor system interface 237 can be connected to the vendors' systems in a number of ways including LAN connection, serial port connection, or terminal connection, etc. These various types of connections will be
5   described in further detail below.

Figure 3 shows a functional block diagram of one embodiment of the centralized system 201 described above with respect to Figure 2. It will be recognized by one skilled in the art that the following description is for illustration purposes only and does not in anyway limit the scope of the present invention. In one embodiment, the logic and/or
10   functions that are described below can be implemented using one or more programming languages suitable for the software or system development in a client-server environment, such as Visual Basic, C++ or Java, etc. It should be recognized by one skilled in the art, however, that the logic or functions described herein can be implemented by other programming languages, circuits, or techniques in accordance with the teachings of the
15   present invention without loss of generality.

Continuing with the present discussion, the centralized system 301 contains a user profile/account update logic or function 311, a new order processing logic or function 321, an existing order processing logic or function 331, a reporting logic or function 341, and other functions 351. The user profile/account update logic 311
20   contains logic to allow purchasers and vendors of auto parts to register with the centralized system, to establish and maintain their user profile and account information that are used for various purposes by the centralized system as described in greater detail below. In one embodiment, the user profile and account information maintained for a purchaser includes the purchaser account information such as business name and address,
25   information specifying one or more major metropolitan markets in which the purchaser is located; user account information that allows for the tracking of individual usage and tailoring individual access to different functions of the centralized system; information regarding vendor selection and assignment of vendor type that are used by the centralized system to perform various functions as described in more detail below; and display
30   preferences with respect to vendors and costs of parts, etc. Similarly, the user profile and account information maintained for vendors includes vendor company information

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such as business name, address, and major metropolitan market areas in which the vendors are located; vendor services information including delivery and shipping options; vendor user information specifying system access and authorization levels; information indicating the manufacturer lines carried by the vendor; and display preferences with

5   respect to prices, etc.

The new order processing logic 321 contains logic to receive, process, and transmit various types of requests from purchasers to vendors and logic to receive, process, and transmit various types of responses from vendors to purchasers. The various types of requests and responses that are received, processed, and transmitted by

10   the new order processing logic 321 are described in detail below. In one embodiment, the existing order processing logic 331 contains logic to process various types of transactions and requests regarding existing auto part orders between the purchasers and vendors. The reporting logic 341 contains logic to generate various types of reports for the users of the system including purchasers and vendors based upon the report request type and

15   information available in the system.

In one embodiment, the new order processing logic 321 contains catalog query logic 323, a stock check logic 325, and an order placement logic 327. The catalog query logic 323 is used to perform a catalog query function to identify and present to a purchaser a list of auto parts entries in the catalog 213 that match the query criteria

20   specified by the purchaser. For purposes of discussion herein, the list containing auto parts entries in the catalog that match the query criteria specified by the purchaser is also referred to as the matched list or catalog results. The stock check logic 325 contains logic to allow the purchaser to select one or more part entries in the matched list to be stock checked. The stock check logic 325 also contains logic to allow the purchaser to specify,

25   for each part entry selected to be stock checked, one or more vendors to whom the stock check request for the respective selected part is to be sent. The order placement logic 327 contains logic to allow the purchaser to place an order request for one or more part entries for which stock check information have been received from the vendors. The order placement logic 327 also contains logic to allow the purchaser to specify, for each

30   part to be ordered, one or more vendors to whom an order request for the selected part is to be sent.

The existing order processing logic 331, in one embodiment, contains order status logic 333, an order cancellation logic 335, an order return logic 337, and a delivery update logic 339. The order status logic 333 is used to obtain order status information from one or more vendors. In one embodiment, the order status logic 333 contains logic to generate

5   a summary status list for jobs within a particular purchaser's account. The generation of the summary status list is described in further detail below. In one embodiment, the order status logic 333 contains logic to allow the purchaser to select, from the summary status list, a particular order number to obtain more detailed status information about that particular order. In one embodiment, the status information for a particular order or

10   job contains, for each item on the order or job, the stock check status, order status including when order request is sent, accepted, etc., return status, and core status, etc. The order cancellation logic 335 contains logic to allow a purchaser to review existing part orders and individually select one or more items from one or more specific part orders to be canceled. The return logic 337 is used to allow a purchaser to review existing

15   part orders and individually select one or more part items from one or more specific part orders to be returned. In one embodiment, a purchaser can initiate a cancellation and/or return action when viewing the order status of a particular order. The delivery update logic 339 allows a user to view and update pickup/delivery information with respect to part items that have been ordered, the cores corresponding to the part items ordered, and

20   return information with respect to return items. In one embodiment, the delivery update logic 339 contains logic to display a summary list of pickup/delivery information with respect to a particular vendor selected by the user. In one embodiment, the delivery update logic 339 further contains logic to allow the user to individually select one or more part items in the list to indicate that the respective part items have been received, logic to

25   individually select one or more part item in the list to indicate that the cores for the respective part items have been returned, and logic to specify whether a particular part item has been returned.

Figure 4 shows a structure diagram of one embodiment of the transaction database 221 described in Figure 2 above. As illustrated in Figure 4, the transaction database 221,

30   in one embodiment, is configured to store both user information 401 and transaction information 451. In one embodiment, the user information 401 contains the vendor

information 405 and the purchaser information 409. As described above, the vendor information 405 includes the vendor company information, the vendor services information, the vendor user authentication information, information about the manufacturer/line of products carried by the vendor, etc. The purchaser information 409 includes the purchaser account information, the purchaser user login information, the vendor selection and vendor type, and display preferences, etc.

In one embodiment, the transaction information 451 stored in the transaction database 221 includes the job information 455, the stock check requests 459, stock check responses 463, order requests 467, order confirmations 471, cancellation requests 475, cancellation confirmations 479, return requests 481, return authorizations 485, return confirmations 497, etc. A detailed description of the creation and update of the various types of information and transactions stored in the transaction database 221 is provided below. As explained above, in one embodiment, the transaction database 221 is implemented as a relational database structure and the various information stored in the transaction database 221 can be organized and maintained in various tables that can be cross-referenced or linked together using certain data items stored as keys or descriptors. The transaction database 221, however, is not limited to relational database structure and can be implemented in any other database or file structure including flat file, indexed file, hierarchical database, networked database, etc. or any combinations thereof.

Figure 5 shows a tree view diagram of one embodiment of the transaction database 221 with respect to some of the information stored therein. A purchaser identified as purchaser 1 (e.g., a repair shop that has registered with the centralized system 201) may have created multiple jobs (e.g., job 1, job 2,..., job N), the information of which are stored in the transaction database 221. As shown in Figure 5, each of these jobs originates from purchaser 1 and therefore can be traced back to purchaser 1 using some identifiers, for example a unique purchaser identifier assigned to purchaser 1 by the system. Each of these jobs may have one or more transaction requests associated with it. For example, as shown in Figure 5, job 1 has two stock check requests (stock check 1 and stock check 2) and two order requests (order 1 and order 2) associated with it. Since these requests are associated with job 1, they can be linked or traced back to job 1 using an identifier, for example a unique job identifier

generated by the system. Each stock check request, for example stock check 1, may have one or more stock check request items (i.e., specific part items to be stock checked). Each stock check item, for example stock check item 1, may have a corresponding stock check response.

5   Figure 6 shows a table-view representation of one embodiment of the transaction database 221. As shown in Figure 6, the transaction information are organized and maintained in various tables that are cross-referenced or linked by certain data items stored in the tables (keys or descriptors). In this example, information about the various jobs created by the purchasers are stored in a table referred to as job table 611. Stock

10   check requests submitted by the purchasers are stored in a table referred to as stock check table 621. Likewise, order requests are stored in a table called order table 625. Each stock check request stored in the stock check table 621 may have one or more corresponding stock check items stored in the stock check item table 631. Similarly, each order request stored in the order table 625 may have or more order items stored in the

15   order item table 635. Each stock check item stored in the table 631 may have a corresponding stock check response stored in the stock check response table 641. Entries that are stored in the various tables mentioned above are also referred to as records or rows in the present specification. Again, the table structures shown in Figure 6 are for illustrative purposes only and it would be obvious to one skilled in the art that

20   the table structures described herein can be implemented by other data structures, methods, and techniques within the scope of the present invention.

        Figure 7 shows a structure diagram of one embodiment of the message database 233 described above with respect to Figure 2. In one embodiment, the message database 233 is implemented as a relational database using various tables to store various types of

25   transaction information including transaction requests and responses. The various tables in the message database 233 include an order table 701, a request item table 711, a stock check response table 721, an order response table 731, and a comment table 741. In one embodiment, the message type in the order table 701 and the request-item table 711 is used to indicate whether the information stored in the tables is for a request (e.g., stock

30   check request) or response (e.g., stock check response) and also the type of request or response. The use of the message type in processing various types of transaction

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requests and responses is described in detail below. As shown in Figure 7, each order

entry (also referred to as an order record or row) in the order table 701 can have one or

more corresponding entries in other tables, for example, the request item table 711.

Likewise, each entry in the request item table 711 can have one or more corresponding

5   entries in other tables, for example the stock check response table 721. As illustrated in

Figure 7, the OrderID field is used a key to link entries in the order table 701 with entries

in other tables. Likewise, the OrderID field and ItemID field are used as a key to link the

other tables together.

          Figure 8 shows a tree-view representation of the message database 233 described

10   in Figure 2 and Figure 7. In this representation, one of the order entries in the order table,

for example order 1, may have one or more corresponding entries in the request item

table, for example request items 1, 2, and 3. Each of these request items may have one or

more corresponding entries in other tables. For example, request item 1 of order 1 may

have a corresponding entry in the stock check response table, a corresponding entry in

15   the order response table, and a corresponding entry in the comment table.

          Figure 9 shows a table-view representation of one embodiment of message

database 233. As shown in Figure 9, the transaction information (e.g., transaction

requests, responses, etc.) are organized and maintained in various tables that are cross-

referenced or linked by certain data items stored in the tables (keys or descriptors). In

20   this example, each order entry in the order table 901 may have one or more corresponding

entries in the request item table 911. Each request item in the request item table 911 may

have one or more corresponding stock check responses in the stock check response table

921 and order responses in the order response table 931, etc. The table structures shown

in Figure 9 are for illustrative purposes only and it would be obvious to one skilled in the

25   art that the table structures described herein can be implemented by other data structures,

methods, and techniques within the scope of the present invention.

          Figure 10 shows a block diagram of the vendor gateway 227 described above with

respect to Figure 2. In one embodiment, the vendor gateway 227 contains one or more

vendor terminal interface (VTI) units 1011 and one or more vendor response server

30   interface (RSI) units 1015. In one embodiment, the vendor terminal interface 1011 and

the vendor response server interface 1015 retrieve request messages (e.g., stock check

request messages, etc.) from the message database 1005 and submit the request messages to selected vendors in a format that is compatible with the vendors' systems. The vendor terminal interface 1011 and the vendor response server interface 1015 then receive response information from the vendors and update the message database 1005 with the

5   response information received from the vendors. In one embodiment, the vendor interface 1011 is used to exchange information (e.g., stock check requests and responses, etc.) between the centralized system 201 and those vendors with terminal emulation connection 1021 and 1029. The vendors with terminal emulation can be further classified into two different categories based upon the respective communication protocols used.

10 In this example, vendor 1021 is a vendor that has terminal emulation using RS232 protocol while vendor 1025 is a vendor that uses TCP/IP terminal emulation protocol. In one embodiment, to centralize and simplify the vendor terminal interface configuration, two interface products are used. One product is called a terminal server produced by Lantronix Corporation of Irvine, California. The terminal server is used to convert

15 RS232 protocol to TCP/IP message packets. The other product is called MitemView produced by Mitem Corporation of Menlo Park, California. MitemView is a tool used to construct interfaces to vendor (distributor) systems without modifying the vendor (distributor) system software. In one embodiment, this is accomplished by creating a "virtual user" session with the distributor system by connecting the vendor gateway to

20 the terminal port on the distributor system. In one embodiment, the MitemView virtual user session receives requests from the vendor gateway message dispatcher and processes the messages interactively with the distributor system. The MitemView product not only simplifies the construction of each individual distributor system interface but also provides a server-based implementation of the terminal interaction with

25 the distributor system. Referring again to Figure 10, the vendor terminal interface 1011 uses the MitemView interface to communicate with vendor 1021 that has TCP/IP terminal emulation configuration. The vendor terminal interface 1011 communicates with vendor 1025 using both the MitemView interface to exchange information and the terminal server to convert RS232 protocol to TCP/IP message packets.

30   As illustrated in Figure 10, the vendor response server interface 1015 is used to exchange information between the centralized system 201 and those vendors with

TCP/IP response servers, vendor 1029 in this example and those vendors with RS232 response servers, vendor 1033 in this example. In one embodiment, the vendor response server interface 1015 communicates with vendor 1029 using XML messages to exchange transaction information between the centralized system 201 and vendors with TCP/IP

5   response servers, e.g., vendor 1029.

Figure 11 shows a block diagram of the vendor response server interface 1015 described above with respect to Figure 10. In one embodiment, the vendor response server interface 1015 is structured to include multiple threads with each thread containing one Response Server Interface Dispatcher (RSI Dispatcher) COM object 1101

10   communicating with one vendor response server. As shown in Figure 11, each RSI Dispatcher 1101, in one embodiment, contains a data access module 1110 and a data communication module 1120. The data access module 1110 is used to retrieve requests (e.g., stock check requests, order requests, etc.) from the message database 233 and convert these requests to appropriate XML messages to be sent to the vendor response

15   server. The data access module 1110 is also used to convert XML messages (e.g., stock check response messages, order confirmation messages, etc,) received from the vendor response server to an appropriate format for storing in the message database 233. The communication module 1120, in one embodiment, contains routines to send XML messages to and receive XML messages from the vendor response server using TCP/IP.

20   As shown in Figure 11, in one embodiment, the data access module contains an XML reader module 1112 and an XML writer module 1114. The XML reader module 1112 is used to parse XML messages into a format ready to be stored in the message database 233. The XML writer module 1114 is used to build XML messages from the data read from the message database 233. In one embodiment, the vendor response server interface

25   1015 can be configured to have multiple RSI Dispatchers communicating to one vendor response server. For example, if there are three vendors A, B, and C and it is determined that there are three times more requests going to vendor A than to the other vendors.. In this case, the vendor response server interface 1015 can be configured to have five RSI Dispatchers: three communicating with vendor A, one communicating with vendor B, and

30   one communicating with vendor C. In one embodiment, the connection information for each RSI Dispatcher (e.g., what vendor to connect to) can be stored in a configuration

file, for example an NT registry file, a database file, or a flat file, etc. In one embodiment, this configuration file is also used to tell the vendor response server interface system 1015 the number of RSI Dispatchers to start.

Figure 12 illustrates one example of a sequence of events that take place in a typical transaction scenario between a purchaser and a vendor using the centralized processing system 201 described above. The sequence of events starts at block 1201. At block 1205, a customer (e.g., a vehicle owner) arrives at a repair shop with a repair request. At block 1207, a repair shop technician determines the parts required for the repair. At bock 1209, the repair shop technician logs on to the market server of the centralized system 201 described above. It is assumed that the repair shop in this example has already established an account with the centralized system and therefore does not need to go through the process of creating a new account. At block 1211, after logging on to the market server, the technician creates a new job to keep track of related transactions to be processed by centralized system subsequently. At block 1213, the technician locates one of the parts required for the repair job using an interface to the parts catalog in the market server. At block 1215, the market server returns a list of parts available from various manufacturers. The process then proceeds to block 1217 where the technician selects one or more parts from the list to be stock checked. At decision block 1219, the process loops back to block 1213 if there are more required parts. Otherwise, the process continues to block 1221 where the technician requests a stock check for the selected parts from one or more vendors. At block 1223, the market server stores the stock check request in the transaction database. At block 1225, the stock check request is passed to one or more distributor systems by the vendor gateway. At block 1227, a stock check response is generated by the distributor systems and passed to the transaction database by the vendor gateway. At block 1229, the stock check response is displayed to the technician. At block 1231, the technician reviews the stock check response and selects the parts to be added to one or more distributor orders. At block 1233, the technician requests the orders to be sent to the distributors. At block 1235, the market server stores the order request in the transaction database. At block 1237, the order request is passed to one or more distributor systems by the vendor gateway. At block 1239, the order is processed by the distributor systems and order

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confirmations are passed to the transaction database by the vendor gateway. At block 1241, the order confirmation is displayed to the technician. At block 1243, the distributor ships the parts ordered to the repair shop. At block 1245, the delivery of the parts is acknowledged by indicating each part received using an interface to the market

5   server.

Figure 13 shows a flow diagram of one embodiment of a method 1300 for facilitating and processing auto parts transactions between multiple vendors and purchasers using the centralized processing system 201 described above. The method 1300 starts at block 1301 and proceeds to block 1305. At block 1305, a purchaser logs

10   on to the system. As mentioned above, in one embodiment, the purchaser can establish a connection with the system via the Internet. However, the teachings of the present invention are equally applicable when the user connects to the system via a Local Area Network (LAN), a Wide Area Network (WAN), or other types of network connections. As described above, in one embodiment, the purchaser can use a client browser software

15   such as the Netscape® Communicator software or the Microsoft® Internet Explorer software to communicate with the system (i.e., transmitting data to and receiving data from the system, etc.). For the purposes of the present specification, the Internet browser software or any other software program used by the user to communicate with the system is also referred to as the client program.

20   Continuing with the present discussion, at decision block 1309, the method proceeds to block 1313 to perform an account registration function, to be described in more detail below, if the purchaser is a new user and has not established an account including account and user profile information with the system. Otherwise the method proceeds to block 1317. After performing the account registration function, the method

25   also proceeds from block 1313 to block 1317. At block 1317, a default menu interface is displayed to the purchaser that allows the purchaser to invoke one of the functions that are described in more detail below. In one embodiment, after the purchaser logs on to the system, a summary status list for jobs that are within the user's account (i.e., purchaser's account) is generated and displayed to the purchaser to let him know at a

30   high level the current status of the jobs including the status of the particular orders associated with each job. In the present specification, the term "job" may be used to

refer to a work order or repair order or project with respect to a particular vehicle. The term "job" may also used to refer to any larger group of work to which one or more part orders belong for tracking purposes.

Continuing with the present discussion, the purchaser can elect to perform a
5   number of different functions with respect to each job or each order being displayed based upon the current status of each respective job or order. The different functions that can be performed based upon the current status of the jobs or orders being displayed are described in more detail below.

Referring again to Figure 13, the method 1300 proceeds from block 1317 to block
10   1321 where the purchaser initiates a transaction activity or invokes a function. At decision block 1325, the method either proceeds to block 1331, block 1333, block 1335, block 1337, or block 1339, depending upon the function selected or activity initiated by the purchaser. At block 1331, a new order processing function is performed. The new order processing function is described in more detail below. At block 1333, the method
15   1300 performs an existing order processing function that includes order tracking and status function, order return function, order cancellation function, etc. These existing order processing functions are described in further detail below. At block 1335, a reporting function is performed. At block 1337, an account update function is performed. At block 1339, other functions are performed including user supporting
20   functions.

The method then proceeds from block 1331, block 1333, block 1335, block 1337 or block 1339 to decision block 1351. At decision block 1351, the method 1300 loops back to block 1325 if there are more activities or functions to be performed. Otherwise the method 1300 proceeds to end at block 1391.

25   Figure 14 illustrates a flow diagram of one embodiment of a process 1400 for creating/updating a purchaser account and profile information in the centralized processing system 201. The process 1400 starts at block 1401 and proceeds to block 1405 to display a purchaser account information user interface (UI) in response to a request made by the purchaser to create or update a purchaser account. The purchaser
30   account information UI is used by the purchaser to enter his account information including the business name and address, contact information, etc. In addition, the

purchaser account information UI also allows the purchaser to specify a market area (also referred to as the metropolitan area) in which the purchaser is located. The market area or metropolitan area information specified by the purchaser will be used by the system to perform various functions described herein including selecting the vendors that

5   are located in the same metropolitan area with whom the purchaser may wish to do business. An example of a purchaser account information UI is shown in Figure 15A. At block 1407, the purchaser account information entered by the purchaser using the purchaser account UI as shown in Figure 15A is obtained and stored in the transaction database. In response to the purchaser's request to continue with the account

10   registration, the process 1400 proceeds to block 1409 to display a primary user login information user interface. This UI is provided to allow the purchaser to enter information about the primary user for the purchaser account including user name and password, level of access to certain functions within the centralized processing system, etc. In one embodiment, the purchaser is allowed to have multiple users with their own

15   unique user-name/password combinations for logging on to the centralized processing system. This will allow for the tracking of individual usage and tailoring different levels of access to certain functions that are available in the centralized processing system. An example of a user interface allowing the purchaser to enter information with respect to one or more users of the purchaser account is illustrated in Figure 15B.

20   Continuing with the present discussion, the process 1400 proceeds to block 1411 to obtain and store the user information entered by the purchaser. At block 1413, an account user summary is displayed to the purchaser showing the user information for each user in the purchaser account including the employee name, user name, password, and the corresponding permission level. An example of an account user summary is

25   provided in Figure 15C. From this account user summary, the purchaser can select to delete one or more specific users in this list as well as adding more users to the purchaser account. The account user summary interface also allows the purchaser to modify the permission level assigned to each user in his account. The process then proceeds to block 1415 to display a local supplier (vendor) selection interface listing vendors that are

30   located in the same metropolitan area as the purchaser. An example of a local vendor selection interface is shown in Figure 15D. Information about each vendor is displayed

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in this interface including vendor name and address, vendor contact information, etc. The interface also allows the purchaser to individually select the vendors with whom he wishes to conduct business and to assign a specific vendor type to each vendor selected. In one embodiment, a local vendor may be designated by the purchaser to be a primary

5   local vendor, a secondary local vendor, or an alternate local vendor. The vendor type assigned to each selected vendor by the purchaser will be used by the system for various purposes that are described herein. In one embodiment, the primary vendors have the highest display preferences followed by the secondary vendors and then the alternate vendors. At block 1417, vendor selection information and vendor type information are

10   obtained and stored in the transaction database. At block 1419, a matrix summary of local primary, secondary, and alternate vendors is displayed to the purchaser including the specific manufacturer/line carried by each selected vendor. An example of the matrix summary of local vendors is shown in Figures 15E and 15F.

The process 1400 then proceeds to block 1421 to display a "will ship"

15   aftermarket vendor selection interface to allow the purchaser to select one or more vendors as the primary will-ship vendors, one or more vendors as the secondary will-ship vendors, and one or more vendors as the alternate will-ship vendors. An example of a will-ship aftermarket vendor selection is shown in Figure 15G. After the purchaser makes the selections with respect to the will-ship vendors, the process 1400 proceeds to

20   block 1423 to obtain and store the will-ship vendors selection information in the transaction database. At block 1425, a matrix summary containing the selected will-ship aftermarket vendors by manufacturer/line is displayed. An example of a summary of will-ship vendors is illustrated in Figures 15H and 15I. The process then proceeds to block 1427 to display a summary of all selected vendors including local aftermarket

25   vendors and will-ship aftermarket vendors. An example of the summary of all selected vendors is shown in Figure 15J. The purchaser can specify, for each vendor displayed in the summary, a relative display order with respect to other vendors of the same vendor type. The relative display order specified by the purchaser will be used by the system in performing various functions including the catalog query and stock check processing

30   functions to determine, as between two or more vendors of the same vendor type (e.g., primary local vendors), which vendor has a higher display priority. In one embodiment,

a relative display priority for each vendor with respect to other vendors within the same vendor type can be specified by the purchaser using a drop down numeric menu. Vendor display priority information is stored in the transaction database at block 1429. The process 1400 then proceeds to block 1431 to allow the purchaser to specify, for each vendor selected, the vendor price display preferences. For each vendor in his profile, the purchaser can select a "selling price calculation method" option. The selling price can be selected by the purchaser to be either the vendor suggested selling price or another pricing method such as cost plus markup %. If the percentage markup on cost option is chosen, the purchaser enters a markup percentage that is used by the system to calculate the selling price. The purchaser can also select a cost display option for each vendor in his profile. The purchaser can specify whether cost is to be displayed or not. An example of a user interface allowing the purchaser to select vendor price display preferences is shown in Figure 15K. The process 1400 then proceeds to block 1433 to store the vendor price display preferences. At block 1435, an interface is provided to allow the purchaser to specify whether to display both primary and secondary vendors together or only primary vendors. An example of this interface is shown in Figure 15L. At block 1437, information about vendor default display preference is obtained and stored in the transaction database. At block 1439, the purchaser account and profile information as described above are stored in the transaction database. As described herein, the purchaser account and profile information provided by the purchaser and stored in the transaction database will be used for various purposes by the centralized system including allowing the purchaser to select a group of vendors of a particular vendor type for stock check and order purposes and tailoring the vendor display preferences in certain user interfaces based upon the preferences specified by the purchaser. The various uses of the purchaser account and profile information in performing certain system functions are described in more detail below. The process 1400 proceeds to end at block 1491.

Figure 16 shows a flow diagram of one embodiment of a process 1600 for creating/updating a vendor's account and profile information in the centralized system 201. The process 1600 starts at block 1601 and proceeds to block 1605 to display a vendor company information user interface in response to a request made by the user to

create or update a vendor account. The vendor company information UI is used by the vendor to enter his company information including the business name and address, contact information, and business hours etc. In addition, vendor company information UI also allows the vendor to specify a market area (also referred to as the metropolitan

5   area) in which the vendor is located. The market area or metropolitan area information specified by the vendor will be used by the system to perform various functions described herein including selecting the purchasers that are located in the same metropolitan area with whom the vendor may wish to do business. An example of a vendor account information UI is shown in Figure 17A. At block 1607, the vendor

10   company information provided by the vendor using the UI as shown in Figure 17A is obtained and stored in the transaction database. In response to the vendor's request to continue with the account registration, the process 1600 proceeds to block 1609 to display a vendor services information user interface as shown in Figure 17B. This UI is provided to allow the vendor to enter information about the kinds of services that are

15   offered by the vendor including the delivery options or services, shipping options, whether the vendor permits the purchasers to place parts on hold, and other terms and conditions relevant to the vendor's business, etc. The vendor services information is obtained and stored in the transaction database at block 1611. At block 1613, a vendor user authentication UI is displayed to allow the vendor to enter information for system

20   access including user name and password, level of access to certain functions within the centralized processing system, etc. In one embodiment, the vendor is allowed to have multiple users with their own unique user-name/password combinations for logging on to the centralized processing system. This will allow for the tracking of individual usage and tailoring different levels of access to certain functions that are available in the

25   centralized processing system. An example of a user interface allowing the vendor to enter information with respect to one or more users of the vendor account is illustrated in Figure 17C.

Continuing with the present discussion, the process 1600 proceeds to block 1615 to obtain and store the user information provided by the vendor. At block 1617, an

30   account user summary is displayed to the vendor showing the user information for each user in the vendor account including the employee name, user name, password, and the

corresponding permission level, etc. An example of an account user summary is provided in Figure 15D. In one embodiment, from this account user summary, the vendor can select to delete one or more specific users in this list as well as adding more users to the vendor account. The account user summary interface as shown in Figure

5   17D also allows the vendor to modify the permission level assigned to each user in his account. The process 1600 then proceeds to block 1619 to display a vendor manufacturer/line selection interface. This UI allows the vendor to specify specific lines of products from different manufacturers that are carried by the vendor. An example of this interface is illustrated in Figure 17E. At block 1621, the information with respect to

10   the specific lines of products carried by the vendor is obtained and stored in the transaction database. At block 1623, a vendor parts sub-group selection interface is displayed to allow the vendor to specify information with respect to the various parts sub-groups for which the vendor is willing to provide stock check information to the purchasers. A parts sub-group, in one embodiment, is considered a subset of a larger set

15   of different parts that are included within a particular line of product. In one embodiment, the vendor can specify a specific line code for each parts sub-group. An example of a parts sub-group selection interface is shown in Figure 17F. The process 1600 then proceeds to block 1625 to store the parts sub-group selection information in the transaction database. At block 1627, a vendor workflow procedures interface is

20   provided to allow the vendor to specify information relevant to his transaction review and approval procedure, for example whether manual approval of all stock checks and orders is required, etc. This interface also allows the vendor to specify the pricing display options. An example of this user interface is illustrated in Figure 17G. The process 1600 then proceeds to block 1629 to obtain and store information with respect

25   to the vendor workflow procedures in the transaction database. At block 1631, an interface is displayed to allow the vendor to view a list of purchasers that are located in the same metropolitan area as the vendor. This interface allows the vendor to provide certain information (e.g., customer number, etc.) for the purchasers who already have accounts with the vendor. In addition, this interface allows the vendor to invite one or

30   more purchasers listed to become his customers by sending a business invitation notice to the purchasers selected. An example of this interface is shown in Figure 17H. At

block 1633, information provided by the vendor for the purchasers who already have accounts with him is stored in the transaction database. At block 1635, if the vendor indicates that he wants to invite one or more purchasers to become his customers, an interface will be displayed to allow the vendor to send invitations to the selected

5   purchasers. The process 1600 then proceeds to end at block 1691.

Figure 18 illustrates a flow diagram of one embodiment of a method 1800 for facilitating and automating new orders of auto parts. The method 1800 starts at block 1801 and proceeds to block 1805. At block 1805, a part query request is received from a purchaser. As described above, in one embodiment, the purchaser can establish

10   connection with the centralized processing system via a network (e.g., the Internet). The purchaser can use a client software program such as the Microsoft Internet Explorer or the Netscape Navigator browser software to communicate with the market server of the centralized processing system (i.e., transmit information to and receive information from the market server). In one embodiment, the purchaser can submit a part query request

15   (also referred to herein as part lookup request or part search request) using the vehicle and part specification as the query criteria or using the part number and the manufacturer line code as query criteria. At block 1809, the market server performs a search in the part catalog to identify the part items that match the query criteria specified by the purchaser. The method 1800 then proceeds to block 1813 to display a list of part items

20   retrieved from the part catalog that match the query criteria specified by the purchaser. In one embodiment, the purchase can select, from the list of part items being displayed, one or more specific part items to be stock checked. The purchaser can also specify, for each part item selected to be stock checked, one or more vendors to whom the stock check request is to be sent. At block 1817, a stock check request is received from the

25   purchaser. At block 1821, the stock check request is stored in the transaction database. The method 1800 then proceeds to block 1825 to transmit the stock check request to the vendors selected by the purchaser to receive the stock check request. At block 1829, stock check responses are received from the selected vendors to whom the stock check request is sent. After receiving the stock check responses from the vendors, the method

30   1800 then proceeds to block 1833 to display the stock check responses to the purchaser. In one embodiment, the purchaser can select from the list of stock check responses one

or more specific part items to be ordered. In one embodiment, for each part item selected to be ordered, the purchaser can specify one or more specific vendors to whom the part order is to be sent. At block 1837, a part order request for selected part items from selected vendors is received from the purchaser. The method 1800 then proceeds to

5   block 1841 to store the part order request in the transaction database. At block 1845, the part order request is transmitted to the vendors. At block 1849, part order confirmations are received from the selected vendors to whom the part order request is sent. At block 1853, part order confirmations received from the vendors are displayed to the purchaser. The method 1800 proceeds to end at block 1891. The part query process (i.e., part

10   lookup or part search), the stock check process, and the part order process are described in more detail below.

Figure 19 shows the flow diagram of one embodiment of a part query process 1900 as described above with respect to Figure 18. As mentioned above, the purchaser can perform a part search using either the vehicle and part specifications or using the part

15   number and the manufacturer line code as the search or query criteria. The process 1900 starts at block 1901 and proceeds to block 1905 to display a first part search user interface showing a selectable list of vehicle years for the purchaser to select in order to perform a part query or search using the vehicle and part specification. The first part search interface also provides a box for the user to enter a specific part number for

20   searching if the purchaser wishes to search by part number and manufacturer line code. An example of the first part search interface is provided in Figure 21A. The process 1900 then proceeds to decision block 1909. At decision block 1909, the process 1900 proceeds to block 1913 to perform a part query by part number and manufacturer line code if the purchaser indicates that this is the method he wants to use for part search.

25   Otherwise the process 1900 proceeds to block 1917 to perform the process of part search by vehicle and part specifications. At block 1917, in response to the user's selection of a specific vehicle year in the list of vehicle years, a list of vehicle makes corresponding to the specific year selected is displayed to the user. An example of the system's response to the user's selection of a specific vehicle year is shown in Figure

30   21B. At block 1921, in response to the user's selection of a specific vehicle make from the list of vehicle makes being displayed, a list of vehicle models corresponding to the

specific vehicle make selected is displayed to the user as shown in Figure 21C. The

process 1900 then proceeds to block 1925. At block 1925, in response to the user's

selection of a specific vehicle model from the list of vehicle models being displayed, a list

of various engine types corresponding to the vehicle model selected is displayed to the

5   user as illustrated in Figure 21D. At block 1929, in response to the user's selection of a

specific engine type being displayed, a list of parts groups corresponding to various

subsystems of the specified vehicle (i.e., identified by vehicle year, vehicle make, vehicle

model, and vehicle engine type) is displayed to the user as shown in Figure 21E. This

list of parts groups allows the user to narrow down the part search by selecting or

10   specifying more specific part information (part specification) of the specific part that the

user wants to locate in the part catalog. At block 1933, in response to the user's

selection of a specific part group being displayed, a list of parts subgroups corresponding

to the part group selected is displayed to the user. The list of parts subgroups allows

the user to further narrow down the part search. An example of a list of parts subgroups

15   displayed as a result of the user's selection of a part group is shown in Figure 21F. The

process then proceeds to block 1937. At block 1937, in response to the user's selection

of a specific part subgroup being displayed, the system performs a search in the part

catalog to retrieve the part items or entries that match the search criteria specified by the

user. The process then proceeds to block 1941. At decision block 1941, if the number

20   of part entries or items retrieved from the part catalog exceeds a predetermined number,

for example 100, the process 1900 proceeds to block 1949, otherwise the process 1900

proceeds to block 1945. At block 1945, a list of part entries or items retrieved from the

part catalog is displayed to the user. At block 1949, a multi-selectable list of part

descriptions corresponding to the part subgroup selected is displayed to allow the user

25   to further narrow down the part search, as shown in Figure 21G. At block 1953, in

response to the user's selection of one or more part descriptions being displayed, a list of

part entries corresponding to the part description(s) selected is displayed to the user.

An example of a parts catalog search results interface is shown in Figure 21H. The

process 1900 proceeds to end at block 1991. In one embodiment, the part entries that

30   are retrieved according to the search criteria specified by the user are filtered based upon

the particular vendors that are selected by the user. For example, if the user selects

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primary local vendors as the vendors with whom the user wants to conduct the present business transactions, then only those part entries that belong to the specific lines of products carried by one or more primary local vendors are displayed to the user in the search results interface.

5   Figure 20 shows a flow diagram of one embodiment of a process 2000 for performing a part search based upon a part number and a manufacturer line code provided by the purchaser. The process 2000 starts at block 2001 and proceeds to block 2005. At block 2005, the process 2000 proceeds to block 2009 after a part number is provided or entered by the purchaser. An example of an interface to allow the purchaser

10   to enter a part number for a part search is shown in Figure 21A. After the purchaser has entered a part number and indicated that he wants to continue with the part search, the process 2000 proceeds to block 2007 to display an interface to allow the purchaser an option of either entering a specific manufacturer line code or selecting a valid manufacturer line code to be used in conjunction with the part number for the part

15   search. An example of this user interface is illustrated in Figure 21I. The process then proceeds to block 2009. At decision block 2009, depending on whether the user chooses to enter a specific manufacturer line code, the process either proceeds to block 2013 or block 2019. At block 2013, if the user chooses not to enter a specific line code, the user is allowed to select a specific letter from an alphabetical selection list in order to proceed

20   with the search without entering a specific manufacturer line code. An example of the alphabetical selection list is shown in Figure 21I. At block 2015, in response to the user's selection of a specific letter from the alphabetical selection list, a list of manufacturers whose names beginning with the letter selected by the user is displayed to the user, as shown in Figure 21J, for him to further narrow down the search. At block

25   2017, in response to the user's selection of a specific manufacturer being displayed, a user interface listing various parts subgroups with corresponding line codes is displayed to the user as shown in Figure 21K. This interface allows the user to select one or more specific line codes corresponding to one or more specific parts subgroups being displayed in order to continue with the part search. In one embodiment, the user can

30   select the specific line codes by clicking on the selection boxes corresponding to the specific parts subgroups being displayed as shown in Figure 21K. The process 2000

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then proceeds from block 2017 to block 2023. Referring again to Figure 20, the process 2000 proceeds from block 2009 to block 2019 if a specific line code is entered by the user using an interface as shown in Figure 21I. At block 2019, the specific line code entered by the user is validated to determine whether it is a valid manufacturer line code.

5   At decision block 2021, the process 2000 proceeds to block 2013 if the line code entered or provided by the user is not valid. Otherwise the process 2000 proceeds to block 2023. At block 2023, the process 2000 retrieves part entries in the part catalog that match the part number and the manufacturer line code that is either provided or selected by the user as described above. At decision block 2025, the process 2000 proceeds to

10   block 2027 to display the part entries retrieved from the part catalog if there are part entries in the part catalog that mach the criteria provided by the user (i.e., the part number and the manufacturer line code). An example of the part catalog search results is shown in Figure 21L. In one embodiment, the part entries that are retrieved according to the search criteria specified by the user are filtered based upon the particular vendors that

15   are selected by the user. For example, if the user selects primary local vendors as the vendors with whom the user wants to conduct the present business transactions, then only those part entries that belong to the specific lines of products carried by one or more primary local vendors are displayed to the user in the search results interface. If there is no entry in the part catalog matching the search criteria provided by the user, the

20   process 2000 proceeds to block 2029 to display a message indicating to the user that there is no match found as shown in Figure 21M. In this case, the user is still allowed to submit a stock check request to a part vendor even if there is no part entry in the part catalog that matches the part number and the manufacturer line code provided by the user. As shown in Figure 21M, the user can continue with the stock check process by

25   clicking on the "check stock" button. Assuming in this case that the user wants to continue with the stock check process. At block 2031, in response to the user's indication to perform a stock check on the part item that is not found in the part catalog, the process 2000 display a vendor selection interface as shown in Figure 21N to allow the user to select a specific vendor to whom the stock check request is to be sent. After

30   the user selects a specific vendor and requests the stock check to be sent, the process 2000 then proceeds to block 2033 to perform the stock check processing function that is

described in more detail below. The process 2000 proceeds from either block 2027 or block 2033 to end at block 2091.

Figure 22 illustrates a high level flow diagram of one embodiment of a method 2200 for performing a stock check function utilizing the centralized processing system

5   described above. The method 2200 starts at block 2201 and proceeds to block 2205 to display a list of part entries matching the query criteria specified by the user. The part query process to search the part catalog for part entries matching the query criteria provided by the user is described in detail above. An example of a user interface or screen that is used to display the list of matching part entries is shown in Figure 21H. In

10 one embodiment, as shown in Figure 21H, the matching part entries or catalog search results are displayed in a matrix format with multiple rows and columns where the rows correspond to the part entries and the columns correspond to various pieces of information pertaining to the specific part entries (e.g., part number, part description, list price, etc.). In one embodiment, as illustrated in Figure 21H, the user can change the sort

15 order of the part entries being displayed. For example, as shown in Figure 21H, the user can toggle between sorting the matching part entries by part description or sorting by manufacturer line by clicking on the sort selection button 2107. As described above, in one embodiment, the vendor display order for the catalog search results can be specified by the purchaser during the account registration/update process. In one embodiment, the

20 default vendor display order with respect to the catalog search results are as follows:

1.   Primary vendors alone, in the order specified by the purchaser in the user account and profile information. The vendor with the highest rank (i.e., #1) is displayed in the left-most available column.

2.   Primary and Secondary vendors combined, in the order specified by the user in

25 the user account and profile information. The vendor with the highest rank (i.e., #1) is displayed in the left-most available column.

3.   Secondary vendors, in the order specified by the user in the user account and profile information. The vendor with the highest rank (i.e., #1) is displayed in the left-most available column.

4.   Alternate vendors, in the order specified by the user in the user account and profile information. The vendor with the highest rank (i.e., #1) is displayed in the left-most available column.

Continuing with the present discussion, in one embodiment, the vendors that

5   carry the specific part items being displayed are indicated or made known to the user by providing a corresponding selection box 2113 for each vendor that carries the specific part item, as shown in Figure 21H. The process 2200 then proceeds to block 2209 to allow the user to individually select one or more specific part items to be stock checked. In one embodiment, the user is provided a check box 2111 for each part item to select or

10 click on if he wants the respective part item to be stock checked. At block 2213, for each part item to be stock checked, the user is allowed to specify the required quantity of the respective part item by entering a number in a quantity box 2109 provided. At block 2217, for each part item to be stock checked, the user is allowed to select one or more vendors to whom the stock check request is to be sent. In one embodiment, the vendors

15 that can be selected by the user are vendors who carry the specific product line to which the specific part item to be stock checked belongs. In one embodiment, the user can select the vendors by clicking on the vendor selection box 2113 as shown in Figure 21H. In response to the user's command or indication to submit a stock check request for the selected parts to the selected vendors, the method 2200 proceeds to block 2221 to create

20 one or more stock check requests based upon the user's selections. At block 2225, the stock check requests are sent to the selected vendors. At block 2229, stock check responses for the selected part items are received from the selected vendors. At block 2233, the stock check responses received from the vendors are displayed to the user. An example of a user interface for displaying the stock check responses or results to the user

25 is shown in Figure 23, the detail of which is described below. The method 2200 then proceeds to end at block 2291.

Figure 24 shows a detailed flow diagram of one embodiment of a method 2400 for performing stock checks as described above with respect to Figure 22. In one embodiment, as described herein, the various components or subsystems of the

30 centralized processing system work together to facilitate and process various types of transactions including stock check requests, order requests, etc. The flow diagram as

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shown in Figure 24 describes the various tasks performed by the different components of
the centralized processing system and the interactions thereof to process stock check
requests submitted by users of the system (i.e., purchasers of auto parts). For clarity,
the various tasks performed by the different components of the centralized processing
system (e.g., the market server, the database converter, and the vendor gateway, etc.) and
the interactions thereof are described below in a sequential manner. However, it would
be obvious to one skilled in the art that many of these tasks can be performed in parallel
or concurrently unless there are true logical dependencies between them. In one
embodiment, the market server, the database converter, and the vendor gateway
subsystems can perform their corresponding functions in parallel (i.e., running separate
threads or separate programs in parallel). Furthermore, for clarity and simplicity, the
discussion that follows is sometimes focused the processing of a stock check request by
one user of the system even though everything discussed herein equally applies to the
processing of multiple stock check requests by multiple users of the system.

Referring again to Figure 24, the stock check process 2400 starts at block 2401.
At block 2403, the market server receives a stock check request from a user of the
system. A detailed description of how the user submits a stock check request to the
market server is provided above. At block 2405, the market server updates the
transaction database with the new stock check request submitted by the user. As
described above, in one embodiment, the transaction database contains various tables that
are used for various purposes including storing the relevant information pertaining to
stock check requests and responses, order requests and confirmations, etc. In one
embodiment, the market server updates the corresponding tables (i.e., the stock-check-
requests table and the stock-check-items table) in the transaction database to add the new
stock request and its corresponding stock check items. After updating the transaction
database with the new stock check request, the market server proceeds to block 2407 to
wait for the corresponding stock check response. In one embodiment, the corresponding
stock check response once received from the selected vendor is stored in the transaction
database. At decision block 2409, if the stock check response is available in the
transaction database (i.e., it has been received from the vendor and stored in the
transaction database), the market server proceeds to block 2411 to retrieve the

corresponding stock check response from the transaction database and displays it to the user. Otherwise the market server loops back to block 2407 to wait for the stock check response. The market server then loops back from block 2411 to block 2403 to continue processing new stock check requests.

5   While the market server is performing its corresponding function in processing new stock check requests and responses, the database converter and the vendor gateway subsystem are also performing their corresponding functions in parallel. At block 2431, the database converter scans the transaction database for new stock check requests. At decision block 2433, the database converter proceeds to block 2435 if new stock check

10   requests are found in the transaction database. Otherwise the database converter loops back to block 2431 to continue scanning the transaction database for new stock check requests. At block 2435, for each stock check request found in the transaction database, the database converter updates the message database accordingly to add a new stock check request message and corresponding request item messages. In one embodiment, as

15   described above, the message data base contains a set of message tables used to store the relevant information relating to the various types of transactions including stock check request messages, order placement request messages, etc. In one embodiment, for each new stock check request found in the transaction database, the database converter adds a new record or row to a table called the order table and sets the message type of the new

20   record to a particular value (e.g., STKREQ) to indicate that the newly added record is a new stock check request message. For each part item included in the new stock check request found in the transaction database, the database converter also adds a corresponding record or row to a table called the RequestItem table and set the corresponding message type to a particular value (e.g., STKREQ) to indicate that newly

25   added item in the RequestItem table is for a new stock check request. The new stock check request messages and their corresponding request item messages created by the database converter will be used by the vendor gateway subsystem as described below. At block 2439, the database converter scans the message database for new stock check responses received from the vendors. In one embodiment, the database converter

30   performs a select on the Order table and RequestItem table looking for those rows or records in the tables with the message type set to a particular value indicating stock

check response records (e.g., message type = STKRESP). At block 2441, if there are new stock check response messages found in the message database, the database converter proceeds to block 2443. Otherwise the database converter loops back to block 2439 to continue scanning the message database for new stock check responses. At

5   block 2443, the database converter updates the transaction database accordingly with the new stock check response messages found in the message database. After updating the transaction database with the new stock check responses found in the message database, the database converter sets the message type of the corresponding records in the Order and the RequestItem tables in the message database to a particular value indicating that

10   these records have been used to update the transaction database (e.g., message type = STKUPDT) so that these records will not be processed again the next time the database converter scans the message database for new stock check responses. The database converter then loops back to block 2431 to continue processing new stock check requests and responses.

15   Continuing with the present discussion, while the market server and the database converter perform their corresponding functions in processing stock check requests and responses, the vendor gateway subsystem also perform its corresponding function in parallel. At block 2461, the vendor system interface (VSI) component of the vendor gateway subsystem scans the message database for new stock check request messages.

20   In one embodiment, the VSI performs a select on the Order table and the RequestItem table looking for those records or rows with the message type set to a particular value (e.g., STKREQ). At block 2463, if there are any new stock check request messages found in the message database, the VSI proceeds to block 2465. Otherwise the VSI loops back to block 2461 to continue scanning the message database for new stock check

25   request messages. At block 2465, the VSI submits the new stock check requests found in the message database to the appropriate vendors selected by the user to receive the stock check requests. As disclosed above, depending upon the type of connection and the communication protocol used the by selected vendors, the VSI performs the appropriate communication tasks to exchange information with the corresponding vendors. At block

30   2467, the VSI receives stock check response information from the vendors' systems. At block 2469, the VSI updates the message database accordingly with the stock check

response information received from the vendors. In one embodiment, the VSI creates a
new stock check response record or row in the StockCheckResponse table for each part
item in the RequestItem table based upon the stock check response information received
from the vendors. The VSI also updates the message type of the corresponding records

5   in the Order and RequestItem tables to a particular value (e.g., STKRESP) that is used by
the database converter in scanning the message database for new stock check responses,
as described above. In one embodiment, if the vendors have alternate or substitute parts
for a part item, additional records or rows are created in the StockCheckResponse table
with the same ItemID as the one used for the original part. The VSI then loops back to

10   block 2461 to continue processing new stock check requests and responses. As
described above, the market server, the database converter, and the vendor gateway work
in a coordinated fashion to perform several tasks in processing the stock check requests
and stock check responses.

Figure 25 illustrates a high level flow diagram of one embodiment of a method

15   2500 for performing an order placement function utilizing the centralized processing
system described above. The method 2500 starts at block 2501 and proceeds to block
2505 to display a list of stock check responses (also referred to as stock check results)
that are received from the vendors and stored in the transaction database as described
above with respect to the stock check process. The stock check process to submit stock

20   check requests to and receive stock check responses from selected vendors is described in
detail above. An example of an interface or screen that is used to display the list of stock
check responses or results is shown in Figure 23. In one embodiment, as shown in Figure
23, the stock check responses or results are displayed in a matrix format with multiple
rows and columns where the rows correspond to the specific part items and the columns

25   correspond to various pieces of information pertaining to the specific part items (e.g.,
part number, part description, cost, quantity available, etc.). In one embodiment, as
illustrated in Figure 23, the user can change the sort order of the part entries being
displayed. For example, as shown in Figure 23, the user can toggle between sorting the
stock check results by part description or by manufacturer line by clicking on the sort

30   selection button 2307. As described above, in one embodiment, the vendor display order
for the stock check results can be specified by the purchaser during the account

registration/update process. In one embodiment, the default vendor display order with respect to the stock check results are as follows:

1.   Primary vendors alone, in the order specified by the purchaser in the user account and profile information. The vendor with the highest rank (i.e., #1) is displayed in the left-most available column.

2.   Primary and Secondary vendors combined, in the order specified by the user in the user account and profile information. The vendor with the highest rank (i.e., #1) is displayed in the left-most available column.

3.   Secondary vendors, in the order specified by the user in the user account and profile information. The vendor with the highest rank (i.e., #1) is displayed in the left-most available column.

4.   Alternate vendors, in the order specified by the user in the user account and profile information. The vendor with the highest rank (i.e., #1) is displayed in the left-most available column.

The process 2500 then proceeds to block 2509 to allow the user to individually select one or more specific part items to be ordered. At block 2513, the user is allowed to select one or more specific vendors being displayed to whom the order placement request for the selected item is to be sent. In one embodiment, for each part item in the stock check results list and for each vendor that has provided the corresponding stock check response for the respective part item being displayed, the user is provided a check box 2311 as shown in Figure 23 to select the specific part item to be ordered from the corresponding vendor. In one embodiment, the user can select the specific part items to be ordered from the corresponding vendors by clicking on the order selection box 2311 as shown in Figure 23. At block 2517, in response to the user's command or indication to submit an order placement request for the selected part items, the method 2500 creates one or more order placement requests based upon the user's selections. At block 2521, the order placement requests for the selected part items are sent to the selected vendors. At block 2525, order placement confirmations for the selected part items are received from the selected vendors. At block 2529, the order confirmations for the selected part items from the selected vendors are displayed to the user. The method 2500 then proceeds to end at block 2591.

Figure 26 shows a detailed flow diagram of one embodiment of a method 2600 for performing an order placement processing function as described above with respect to Figure 25. In one embodiment, as described above, the various components or subsystems of the centralized processing system work together to facilitate and process

5   various types of transactions including stock check requests, order requests, etc. The flow diagram as shown in Figure 26 describes the various tasks performed by the different components of the centralized processing system and the interactions thereof in order to process order placements requests submitted by users of the system (i.e., purchasers of auto parts). Again, for clarity, the various tasks performed by the

10   different components of the centralized processing system (e.g., the market server, the database converter, and the vendor gateway, etc.) and the interactions thereof are described below sequentially. However, it would be obvious to one skilled in the art that many of these tasks can be performed in parallel or concurrently unless there are true logical dependencies between them. In one embodiment, the market server, the database

15   converter, and the vendor gateway subsystems also perform their corresponding functions in parallel (i.e., running separate threads or separate programs in parallel). Furthermore, for clarity and simplicity, the discussion that follows is sometimes focused the processing of an order placement request by one user of the system even though everything discussed herein equally applies to the processing of multiple order placement

20   requests submitted by multiple users of the system.

Referring to Figure 26, the order placement process 2600 starts at block 2601. At block 2611, the market server receives an order placement request from a user of the system. A detailed description of how the user submits an order placement request to the market server is disclosed above. At block 2615, the market server updates the

25   transaction database with the new order placement request submitted by the user. As described above, in one embodiment, the transaction database contains various tables that are used for various purposes including storing the relevant information pertaining to stock check requests and responses, order requests and confirmations, etc. In one embodiment, the market server updates the corresponding tables (i.e., the Orders table

30   and OrderItem table) in the transaction database to add the new order placement request and its corresponding order items. At block 2607, the market server waits for the order

confirmation. In one embodiment, the corresponding order confirmation once received from the selected vendor is stored in the transaction database. At decision block 2619, if the order confirmation has been received and stored in the transaction, the market server proceeds to block 2621 to retrieve the order confirmation from the transaction database

5   and displays it to the user. Otherwise the market server loops back to block 2617 to wait for the order confirmation. The market server then loops back from block 2621 to block 2611 to continue processing new order placement requests.

As explained above, while the market server is performing its corresponding function in processing new order placement requests and confirmations, the database

10 converter and the vendor gateway subsystems are also performing their corresponding functions in parallel to process order requests and confirmations. At block 2641, the database converter scans the transaction database for new order placement requests. At decision block 2643, the database converter proceeds to block 2645 if new order placement requests are found in the transaction database. Otherwise the database

15 converter loops back to block 2641 to continue scanning the transaction database for new order placement requests. At block 2645, for each new order placement request found in the transaction database, the database converter updates the message database accordingly to reflect that a new order request has been submitted for selected part items. In one embodiment, as described above, the message data base contains a set of message

20 tables used to store the relevant information relating to the various types of transactions including stock check request messages, order placement request messages, etc. In one embodiment, for each new order placement request found in the transaction database, the database converter updates corresponding records in the Order and the RequestItem tables (these records were already created during the stock check processing phase as

25 described above) to reflect that the corresponding part items that were previously stock checked are now to be ordered. In one embodiment, this is done by updating the message type of the corresponding records in the Order and RequestItem tables to a particular value, for example ORDREQ. The database converter also updates other information of the corresponding records if necessary, for example changing the request quantity to the

30 quantity to be ordered. The message type information will be used by the vendor gateway subsystem to perform its corresponding function as described below. At block

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2649, the database converter scans the message database for new order confirmations (also referred to as order responses) received from the vendors. In one embodiment, the database converter performs a select on the Order table and RequestItem table looking for those rows or records in the tables with the message type set to a particular value

5   indicating order confirmation records (e.g., message type = ORDCONF). At block 2651, if there are new order confirmation messages found in the message database, the database converter proceeds to block 2653. Otherwise the database converter loops back to block 2649 to continue scanning the message database for new order confirmations. At block 2653, the database converter updates the transaction database accordingly with the new

10   order confirmation information found in the message database. After updating the transaction database with the new order confirmations found in the message database, the database converter sets the message type of the corresponding records in the Order and the RequestItem tables in the message database to a particular value (e.g., ORDUPDT) so that they will not be used again the next time the database converter scans the message

15   database for new order confirmations. The database converter then loops back to block 2641 to continue processing new order placement requests and confirmations.

Continuing with the present discussion, while the market server and the database converter perform their corresponding functions in processing order requests and confirmations, the vendor gateway subsystem also perform its corresponding function in

20   parallel. At block 2661, the vendor system interface (VSI) component of the vendor gateway subsystem scans the message database for new order placement request messages. In one embodiment, the VSI performs a select on the Order table and the RequestItem table looking for those records or rows with the message type set to a particular value (e.g., ORDREQ). At block 2663, if there are any new order placement

25   request messages found in the message database, the VSI proceeds to block 2665. Otherwise the VSI loops back to block 2661 to continue scanning the message database for new order request messages. At block 2665, the VSI submits the new order placement requests found in the message database to the appropriate vendors selected by the user to receive the order requests. As disclosed above, depending upon the type of

30   connection and the communication protocol used the by selected vendors, the VSI performs the appropriate communication tasks to exchange information with the

corresponding vendors. At block 2667, the VSI receives order confirmation information from the vendors' systems. At block 2669, the VSI updates the message database accordingly with the new order confirmation information received from the vendors. In one embodiment, the VSI creates a new order response record or row in the

5   OrderResponse table for each part item ordered based upon the order confirmation information received from the vendors. The VSI also updates the message type of the corresponding records in the Order and RequestItem tables to a particular value (e.g., ORDCONF) that is used by the database converter in scanning the message database for new order confirmations, as described above. The VSI then loops back to block 2661 to

10   continue processing new order requests and confirmations. As described and explained herein, the market server, the database converter, and the vendor gateway work in a coordinated fashion to perform several tasks in processing the order placement requests and order confirmations.

Figure 27 illustrates a flow diagram of a method 2700 for providing job status

15   information to the users and for allowing the users to initiate certain activities or functions based upon the status information provided. The method 2700 starts at block 2701 and proceeds to decision block 2705. At decision block 2705, the method 2700 proceeds to block 2711 if the user has indicated that he wants to obtain status information with respect to the open jobs in his account. Otherwise the method 2700

20   proceeds to block 2751. In one embodiment, status of the open jobs is the default option unless the user has indicated otherwise. As described above, transactional information including job information, stock check information, and order information, etc. are stored in the transaction database in various tables. In one embodiment, as disclosed above, the transaction database is structured as a relational database and the various tables are linked

25   together or cross-referenced using certain data fields in the records as keys. For example, as explained above with respect to Figures 4, 5, and 6, each record in the PurchaserAccounts table includes a purchaser ID that can be used to cross-reference, locate, or select the corresponding jobs in the Job table. Similarly, each record in the Job table includes a Job ID that can be used to locate or select associated order records that

30   are stored in the Orders table, etc. At block 2711, the status information for the open jobs in the user's account are retrieved from the transaction database and a status

summary of the open jobs in the user's account is displayed to the user as shown in Figure 28A. As mentioned above, each job may contain multiple order transactions that may have different statuses. In one embodiment, as illustrated in Figure 28A, the status information for each job includes the job name/description and the summary information

5   for each order that belongs to the respective job. The summary information for each order may include the order number, the current status of the order, and the name of the vendor with whom the order is placed. The purchaser can further review more detailed information concerning each particular vendor or each particular order by selecting the appropriate options (e.g., hyperlinks) that are provided in the status summary screen.

10   For example, the user can select a particular vendor name hyperlink 2809 to view more detailed information about that particular vendor. Likewise, the user can obtain more detailed status information of a particular order by selecting the corresponding order number hyperlink 2811 being displayed.

As illustrated in Figure 28A, the purchaser is also allowed to perform a number of

15   different functions based upon the current status of the orders associated with each job being displayed. For example, for each of the jobs that has no active orders (i.e., the current status is "catalog", "stock check", or "order in process"), the purchaser is allowed to cancel the respective job. As shown in Figure 28A, a "cancel job" option 2815 is provided to allow the user to cancel the job if it has no active orders. The user

20   can select to cancel these jobs by clicking on the "cancel job" option 2815. For each of those jobs whose order's current status is "order not verified" or "estimate", the purchaser is allowed to cancel the corresponding order by selecting the "cancel order" option 2817. Moreover, if the current status of the job being displayed is "catalog", the user can select the appropriate hyperlink (e.g., catalog hyperlink 2819) to view the parts

25   catalog search results previously obtained for the user. Similarly, the user can select the stock check hyperlink 2823 to view stock check results or the estimate hyperlink 2829 to go to an estimate user interface or screen.

Referring again to Figure 2700, at block 2713, in response to the user's selection of a vendor hyperlink 2809, more detailed information about that particular vendor

30   including business name and address, contact information, work schedules, etc. are retrieved from the transaction database and displayed to the user. An example of a

screen showing more detailed information about the selected vendor is shown in Figure
28B. At block 2715, in response to the user's selection of an order number hyperlink
2811, a detailed order status history of the selected order is retrieved and displayed to
the user as shown in Figures 28C and 29. At block 2717, in response to the user's

5   selection to cancel a job, a job cancellation function is performed to cancel the selected
job. In one embodiment, a cancel confirmation screen or message is displayed to the user
as shown in Figure 30 to allow the user to confirm whether he indeed wants to cancel the
job selected. At block 2719, in response to the user's indication to cancel an order being
displayed, an order cancel function is performed to cancel the selected order. In one

10   embodiment, an order cancel confirmation screen or message is displayed to the user to
allow him to confirm whether he indeed wants to cancel the particular order selected. At
block 2721, in response to the user's selection of a catalog hyperlink, a list of part
catalog search results previously obtained and stored in the transaction database for the
respective job is retrieved and displayed to the user to allow him to continue the

15   transaction processing (e.g., perform a stock check, etc.) if he wishes to do so. An
example of a parts catalog search results interface is given in Figure 21H and described in
detail above with respect to the part query and stock check functions.

     Continuing with the present discussion, at block 2723, in response to the user's
selection of a stock check hyperlink being displayed, stock check results previously

20   obtained and stored in the transaction database for the respective job are retrieved and
displayed to the user. An example and a detailed description of the stock check results
screen are provided above. At block 2725, in response to the user's selection of an
estimate hyperlink, an estimate interface as shown in Figure 31 is presented to the user.
The method 2700 then proceeds to end at block 2791.

25   Referring again to Figure 27, the method proceeds to block 2751 if the user has
indicated that he wants to view status of the completed jobs. In one embodiment,
completed jobs are jobs that have been closed or canceled by the user. At block 2751, a
summary of status information for all completed jobs within the user's account is
displayed to the user based upon information retrieved from the transaction database.

30   An example of a user interface showing a summary of completed jobs is shown in Figure
32. The user is also allowed to perform a number of different functions from this

interface. For example, the user can select any vendor name hyperlink to view more detailed information about that particular vendor. For each job being displayed in the summary, the user is also allowed to initiate a specific action depending upon the status of the job (e.g., whether it is closed or cancelled). In one embodiment, if the status of a

5   job is completed, an "add parts" option is displayed in the action column as shown in Figure 32 to allow the user to conduct more transactions with respect to that particular job. If the user selects this option (e.g., clicking on the corresponding "add parts" hyperlink), a parts group user interface as shown in Figure 21E will be displayed to the user to allow him to locate one or more parts. If the status of a job is cancelled, a "re-

10   open" option is displayed in the action column as shown in Figure 32 to allow the user to re-open the job for further processing. In one embodiment, if the user selects this option (e.g., clicking on the corresponding "re-open" hyperlink), a parts group user interface as shown in Figure 21E will be displayed to the user.

Continuing with the present discussion, the method 2700 proceeds from block

15   2751 to block 2753 in response to the user's selection of a vendor name hyperlink. At block 2753, more detailed information about that particular vendor including business name and address, contact information, work schedules, etc. are retrieved from the transaction database and displayed to the user. An example of a screen showing more detailed information about the selected vendor is shown in Figure 28B. At block 2755, in

20   response to the user's selection of an "add parts" function, a parts group user interface as shown in Figure 21E is displayed to the user. At block 2757, in response to the user' selection of a "re-open" function, a parts group user interface as shown in Figure 21E is displayed to the user. The method 2700 then proceeds to end at block 2791.

Figure 35 shows a flow diagram of a process 3500 for providing the order status

25   history of an order and for allowing the user to perform certain functions with respect to the part items on the order based upon the current status of those part items. The process 3500 starts at block 3501. At block 3501, in response to the user's request to view the detailed status of a particular order in his account, the detailed status history of each part item on that particular order is retrieved from the transaction database. In one

30   embodiment, as described above, the user can select a specific order being displayed in the job summary status list as shown in Figure 28A to view the detailed status of that

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specific order. An example of an order detailed status history is shown in Figure 33 that includes, for each item on the order, the part item description, the stock check status if applicable, the order status if applicable, the return status if applicable, and the core pick-up status if applicable. As explained above, a particular part item on an order

5   transaction may have a particular status depending upon what phase of the transaction process the part item is in. For example, if the order for a particular part item has been sent to the vendor but has not been accepted, the status history will show the activities that have occurred up to and including the fact that the order has been sent. If the order for a particular part item has been accepted and that part item has been shipped by the

10   vendor, the status history will display information reflecting that such activities have occurred. Therefore, by viewing the detailed status history of any particular order as shown in Figure 33, the user is able to determine not only the current status of each part item on the order (e.g., whether the order has been accepted, whether the part has been shipped, etc.) but also the history of the transaction activities leading up to the current

15   status (e.g., when the catalog search was performed, when the stock check was performed, when the order was sent, etc.). In one embodiment, depending upon the current status of a particular part item on the order, the user is allowed to perform certain functions with respect to that particular part item on the order. For example, if the part item ordered has been shipped or delivered, the user is allowed to submit a return request

20   for that particular part item to the vendor, etc.

Referring again to Figure 35, at block 3509, the current status of a part item on the order is determined. At decision block 3513, based on the current status of the respective part item, the process proceeds to block 3517 if the user is allowed to submit a cancel request for that particular part item on the order. Otherwise the process

25   proceeds to block 3521. At block 3517, the respective part item is marked to indicate that the user is allowed to submit a cancel request therefor if he wishes to do so. In one embodiment, a "cancel" option or hyperlink is displayed in the action column of the respective part item as shown in Figure 33 that can be selected by the user to submit a cancel request.

30   At block 3521, the process proceeds to block 3525 if the user is allowed to submit a return request based upon the current status of the respective part item. Otherwise the

process proceeds to block 3529. At block 3525, the respective part item is marked to indicate that the user is allowed to submit a return request therefor if he wishes to do so. In one embodiment, a "return" option or hyperlink is displayed in the action column of the respective part item as shown in Figure 28C that can be selected by the user to

5   submit a return request. At decision block 3529, the process loops back to block 3509 if there are more part items on the order to process. Otherwise the process proceeds to block 3533 to display a detailed status history of each part item on the order as shown in Figure 33 or Figure 28C. At block 3537, in response to the user's selection to submit a cancel request (e.g., selecting the corresponding "cancel" option or hyperlink provided in

10   the action column), a cancellation function is performed with respect to the part item selected. A detailed description of the cancellation function is provided below. At block 3541, in response to the user's selection to submit a return request for a specific part item being displayed, a return authorization request user interface as shown in Figure 34 is displayed to the user to allow him to enter relevant information with respect to the

15   return request to be submitted to the vendor. Such information may include the quantity to return and the reason for return, etc. as illustrated in Figure 34. At block 3545, in response to the user's selection to submit the return request, a return function is performed. The return function is described in more detail below. The process then proceeds to end at block 3591.

20   Figure 36 shows a detailed flow diagram of one embodiment of a method 3600 for performing a cancel processing function as described above with respect to Figure 35. In one embodiment, as described above, the various components or subsystems of the centralized processing system work together to facilitate and process various types of transactions including stock check requests, order requests, cancel requests, return

25   requests, etc. The flow diagram as shown in Figure 36 describes the various tasks performed by the different components of the centralized processing system and the interactions thereof in order to process cancellation requests submitted by one or more users of the system (i.e., purchasers of auto parts). For clarity, the various tasks performed by the different components of the centralized processing system (e.g., the

30   market server, the database converter, and the vendor gateway, etc.) and the interactions thereof are described below sequentially. However, it would be obvious to one skilled in

the art that many of these tasks can be performed in parallel unless there are true logical dependencies between them. In one embodiment, the market server, the database converter, and the vendor gateway subsystems perform their corresponding functions in parallel (i.e., running separate threads or separate programs in parallel). Furthermore, for

5   clarity and simplicity, the discussion that follows is sometimes focused the processing of a cancellation request by one user of the system even though everything discussed herein equally applies to the processing of multiple cancellation requests by multiple users of the system.

       Referring to Figure 36, the cancellation process 3600 starts at block 3601. At

10   block 3611, the market server receives a cancellation request for a particular part item from a user of the system. A detailed description of how the user submits a cancellation request for a particular part item associated with a particular part order to the market server is disclosed above. At block 3615, the market server updates the transaction database with the new cancellation request submitted by the user. As described above, in

15   one embodiment, the transaction database contains various tables that are used for various purposes including storing the relevant information pertaining to stock check requests and responses, order requests and confirmations, cancellation requests and confirmations, return requests and return authorizations, etc. In one embodiment, the market server updates the corresponding tables (i.e., the Orders table and OrderItem

20   table) in the transaction database to indicate, for each part item to be cancelled, that the respective part item has been requested by the user to be cancelled. At block 3617, the market server waits for the cancellation confirmation. In one embodiment, the corresponding records in the transaction database are updated accordingly once the cancellation confirmations for the respective parts are received from the vendor. At

25   decision block 3619, if the cancellation confirmation has been received and updated in the transaction database, the market server proceeds to block 3621 to retrieve the cancellation confirmation from the transaction database and displays it to the user. Otherwise the market server loops back to block 3617 to wait for the cancellation confirmation. The market server then loops back from block 3621 to block 3611 to

30   continue processing new cancellation requests and confirmations.

As explained above, while the market server is performing its corresponding function in processing cancellation requests, the database converter and the vendor gateway subsystems are performing their corresponding functions in parallel to process cancellation requests and confirmations. At block 3641, the database converter scans the

5   transaction database for new cancellation requests. At decision block 3643, the database converter proceeds to block 3645 if new cancellation requests are found in the transaction database. Otherwise the database converter loops back to block 3641 to continue scanning the transaction database for new cancellation requests. At block 3645, for each new cancellation request found in the transaction database, the database converter

10 updates the message database accordingly to reflect that a cancellation request has been submitted for selected part items. In one embodiment, as described above, the message database contains a set of message tables that are used to store the relevant information relating to the various types of transactions including stock check request messages, order placement request messages, cancellation requests, return requests, etc. In one

15 embodiment, for each new cancellation request found in the transaction database, the database converter updates corresponding records in the Order and the RequestItem tables (these records were already created during the stock check processing phase as described above) to reflect that the corresponding part items are to be cancelled. In one embodiment, this is done by updating the message type of the corresponding records in

20 the Order and RequestItem tables to a particular value, for example CANREQ. The database converter also updates other information of the corresponding records if necessary, for example changing the quantity to the quantity to be cancelled. The message type information will be used by the vendor gateway subsystem to perform its corresponding function as described below. At block 3649, the database converter scans

25 the message database for new cancellation confirmations (also referred to as cancellation approval) received from the vendors. In one embodiment, the database converter performs a select on the Order table and RequestItem table looking for those rows or records in the tables with the message type set to a particular value indicating cancellation confirmation records (e.g., message type = CANCONF). At block 3651, if

30 there are new cancellation confirmation messages found in the message database, the database converter proceeds to block 3653. Otherwise the database converter loops back

to block 3649 to continue scanning the message database for new cancellation confirmations. At block 3653, the database converter updates the transaction database accordingly with the new cancellation confirmation information found in the message database. After updating the transaction database with the new cancellation·

5   confirmations found in the message database, the database converter sets the message type of the corresponding records in the Order and the RequestItem tables in the message database to a particular value (e.g., CANUPDT) so that they will not be used again the next time the database converter scans the message database for new cancellation confirmations. The database converter then loops back to block 3641 to continue

10 processing new cancellation requests and confirmations.

Continuing with the present discussion, while the market server and the database converter perform their corresponding functions in processing cancellation requests and confirmations, the vendor gateway subsystem also performs its corresponding function. At block 3661, the vendor system interface (VSI) component of the vendor gateway ·

15 subsystem scans the message database for new cancellation request messages. In one embodiment, the VSI performs a select on the Order table and the RequestItem table looking for those records or rows with the message type set to a particular value (e.g., CANREQ). At block 3663, if there are any new order placement request messages found in the message database, the VSI proceeds to block 3665. Otherwise the VSI loops back

20 to block 3661 to continue scanning the message database for new cancellation request messages. At block 3665, the VSI submits the new cancellation requests found in the message database to the appropriate vendors selected by the user to receive the cancellation requests. As disclosed above, depending upon the type of connection and the communication protocol used the by selected vendors, the VSI performs the

25 appropriate communication tasks to exchange information with the corresponding vendors. At block 3667, the VSI receives cancellation confirmation information from the vendors' systems. At block 3669, the VSI updates the message database accordingly with the new cancellation confirmation information received from the vendors. The VSI also updates the message type of the corresponding records in the Order and

30 RequestItem tables to a particular value (e.g., CANCONF) that is used by the database converter in scanning the message database for new cancellation confirmations, as

described above. The VSI then loops back to block 3661 to continue processing new cancellation requests and confirmations. As described and explained above, the market server, the database converter, and the vendor gateway work in a coordinated fashion to perform several tasks in processing the cancellation requests and confirmations.

5   Figure 37 shows a detailed flow diagram of one embodiment of a method 3700 for performing a return processing function as described above with respect to Figure 35. In one embodiment, as described above, the various components or subsystems of the centralized processing system work together to facilitate and process various types of transactions including stock check requests, order requests, cancel requests, return

10   requests, etc. The flow diagram as shown in Figure 37 describes the various tasks performed by the different components of the centralized processing system and the interactions thereof in order to process return requests submitted by one or more users of the system (i.e., purchasers of auto parts). For clarity, the various tasks performed by the different components of the centralized processing system (e.g., the market server,

15   the database converter, and the vendor.gateway, etc.) and the interactions thereof are described below sequentially. However, it would be obvious to one skilled in the art that many of these tasks can be performed in parallel unless there are true logical dependencies between them. In one embodiment, the market server, the database converter, and the vendor gateway subsystems perform their corresponding functions in

20   parallel (i.e., running separate threads or separate programs in parallel). Furthermore, for clarity and simplicity, the discussion that follows is at times focused the processing of a return request by one user of the system even though everything discussed herein equally applies to the processing of multiple return requests by multiple users of the system.

          Referring to Figure 37, the return process 3700 starts at block 3701. At block

25   3711, the market server receives a return request for a particular part item from a user of the system. A detailed description of how the user submits a return request for a particular part item associated with a particular part order to the market server is disclosed above. At block 3715, the market server updates the transaction database with the new return request submitted by the user. As described above, in one embodiment,

30   the transaction database contains various tables that are used for various purposes including storing the relevant information pertaining to stock check requests and

responses, order requests and confirmations, cancellation requests and confirmations, return requests and return authorizations, etc. In one embodiment, the market server updates the corresponding tables (i.e., the Orders table and OrderItem table) in the transaction database to indicate, for each part item to be returned, that the respective part

5   item has been requested by the user to be returned. At block 3717, the market server waits for the return authorization (also referred to as return approval). In one embodiment, the corresponding records in the transaction database are updated accordingly once the return authorizations or approvals for the respective parts are received from the vendor. At decision block 3719, if the return authorization or approval

10   has been received and updated in the transaction database, the market server proceeds to block 3721 to retrieve the return authorization from the transaction database and displays it to the user. Otherwise the market server loops back to block 3717 to wait for the return authorization. The market server then loops back from block 3721 to block 3711 to continue processing new return requests.

15   While the market server is performing its corresponding function in processing cancellation requests, the database converter and the vendor gateway subsystems are also performing their corresponding functions in parallel to process return requests and authorizations. At block 3741, the database converter scans the transaction database for new return requests. At decision block 3743, the database converter proceeds to block

20   3745 if new return requests are found in the transaction database. Otherwise the database converter loops back to block 3741 to continue scanning the transaction database for new return requests. At block 3745, for each new return found in the transaction database, the database converter updates the message database accordingly to reflect that a return request has been submitted for selected part items. In one

25   embodiment, as described above, the message data base contains a set of message tables that are used to store the relevant information relating to the various types of transactions including stock check request messages, order placement request messages, cancellation requests, return requests, etc. In one embodiment, for each new return request found in the transaction database, the database converter updates corresponding

30   records in the Order and the RequestItem tables (these records were already created during the stock check processing phase as described above) to reflect that the

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corresponding part items are to be returned. In one embodiment, this is done by
updating the message type of the corresponding records in the Order and RequestItem
tables to a particular value, for example RETREQ. The database converter also updates
other information of the corresponding records if necessary, for example changing the

5   quantity to the quantity to be returned. The message type information will be used by
the vendor gateway subsystem to perform its corresponding function as described below.
At block 3749, the database converter scans the message database for new return
authorizations (also referred to as return approval) received from the vendors. In one
embodiment, the database converter performs a select on the Order table and

10   RequestItem table looking for those rows or records in the tables with the message type
set to a particular value indicating cancellation confirmation records (e.g., message type =
RETCONF). At block 3751, if there are new return authorization messages found in the
message database, the database converter proceeds to block 3753. Otherwise the
database converter loops back to block 3749 to continue scanning the message database

15   for new return authorizations. At block 3753, the database converter updates the
transaction database accordingly with the new return authorization information found in
the message database. After updating the transaction database with the new return
authorizations found in the message database, the database converter sets the message
type of the corresponding records in the Order and the RequestItem tables in the message

20   database to a particular value (e.g., RETUPDT) so that they will not be used again the
next time the database converter scans the message database for new return
authorizations. The database converter then loops back to block 3741 to continue
processing new return requests and authorizations.

　　　　Continuing with the present discussion, while the market server and the database

25   converter perform their corresponding functions in processing return requests and
authorizations, the vendor gateway subsystem also perform its corresponding function.
At block 3761, the vendor system interface (VSI) component of the vendor gateway
subsystem scans the message database for new return request messages. In one
embodiment, the VSI performs a select on the Order table and the RequestItem table

30   looking for those records or rows with the message type set to a particular value (e.g.,
RETREQ). At block 3763, if there are any new return request messages found in the

message database, the VSI proceeds to block 3765. Otherwise the VSI loops back to block 3761 to continue scanning the message database for new return request messages. At block 3765, the VSI submits the new return requests found in the message database to the appropriate vendors selected by the user to receive the return requests. As disclosed above, depending upon the type of connection and the communication protocol used the by selected vendors, the VSI performs the appropriate communication tasks to exchange information with the corresponding vendors. At block 3767, the VSI receives return authorization information from the vendors' systems. At block 3769, the VSI updates the message database accordingly with the new return authorization information received from the vendors. The VSI also updates the message type of the corresponding records in the Order and RequestItem tables to a particular value (e.g., RETCONF) that is used by the database converter in scanning the message database for new return authorization, as described above. The VSI then loops back to block 3761 to continue processing new return requests and authorizations. As described and explained above, the market server, the database converter, and the vendor gateway work in a coordinated fashion to perform several tasks in processing the return requests and authorizations.

Figure 38 illustrates a flow diagram of a method 3800 for allowing the user to review and update status information with respect to the delivery of part items, return of cores, and return of part items. The method 3800 starts at block 3801 and proceeds to block 3805. At block 3805, in response to the user's request, current status information with respect to parts delivery, cores return, and parts return in the user's account are retrieved from the transaction database and a summary of status information retrieved from the database is prepared. At block 3809, the summary of status information with respect to delivery, cores, and returns is displayed to the user. An example of a user interface used to display status information with respect to delivery, cores, and returns is shown in Figure 39A. In one embodiment, as shown in Figure 39A, the summary status information displayed to the user includes the names of the vendors, the jobs associated with each vendor, the orders associated with each job, the transaction type for each order, and the status for each order, etc. At block 3813, in response to the user's selection of a particular vendor being displayed in the summary list, a more detailed pickup/delivery summary is displayed to the user that contains a list of individual part

items that the user has ordered from the selected vendor. An example of a user interface used to display the detailed summary list of the pickup/delivery information is shown in Figure 39B. In one embodiment, as shown in Figure 39B, the pickup/delivery user interface is divided or organized into three sections: a section listing individual part items

5   that have been ordered from the selected vendor (orders section), a section listing individual part items for which cores are expected (cores section), and a section listing part items that the user has requested to return for various reasons (returns section). At block 3817, the user is allowed to individually indicate which part items in the orders section have been delivered to or received by the user. In one embodiment, for each part

10   item being displayed in the orders section, a corresponding selection box is provided as shown in Figure 39B to allow the user to indicate which part items have been received. At block 3821, for each part item being displayed in the cores section, the user is allowed to individually indicate whether core(s) for a particular part item has been returned to the selected vendor. In one embodiment, a selection box is provided for each part item in the

15   cores section to allow the user to indicate or specify whether the cores for the respective part item has been returned to the selected vendor. At block 3825, for each part item listed in the returns section, the user is also allowed to individually indicate whether any particular part item listed has been returned to the selected vendor. In one embodiment, as shown in Figure 39B, a selection box is provided for each part item listed in the

20   returns section to allow the user to indicate whether the respective part item has been returned to the selected vendor. At block 3829, in response to the user's request or command to update the status information, the transaction database is updated to reflect the new delivery, core return, and part return status based upon the selections made by the user. The method then proceeds to end at block 3891.

25   Figure 40 shows a flow diagram of one embodiment of a method 4000 for reporting transactional information to a user (purchaser) of the system. The method starts at block 4001 and proceeds to block 4005. At block 4005, in response to the user's request, a user interface as shown in Figure 41A is presented to allow the user to select or specify a particular report type. In one embodiment, as shown in Figure 41A,

30   the user is allowed to select either a customer reporting option or a standard reporting option in order to obtain certain relevant information with respect to the various

transactions in the user's account that are stored in the transaction database. In one embodiment, as shown in Figure 41A, a monthly transaction report summarized by vendors is the default standard report that the user can select. At decision block 4009, the method proceeds to block 4013 if the custom reporting option is selected. Otherwise

5   the method proceeds to block 4017. At block 4013, the user is allowed to download data from the system in order to create his customized reports. In one embodiment, the user is allowed to specify various criteria or parameters that are used to select the data that he wants to download. The various criteria or parameters that the user can specify for data selection include the particular database format from the available database formats (e.g.,

10   text file, Microsoft Access, Microsoft Excel, etc.), data beginning date, data ending date, data filter (e.g., data for all transactions, data for one vendor, data for one vendor affiliation, or data for a specific manufacturer, etc.). At block 4017, a monthly transaction report organized by vendors based upon information retrieved from the transaction database is displayed to the user. An example of a monthly transaction

15   report is shown in Figure 41B. In one embodiment, a drill-down reporting mechanism is provided to allow the user to view or obtain more detailed information regarding the summary information in the monthly transaction report. At block 4021, in response to the user's selection of a particular vendor being displayed, a weekly transaction report for the selected month with respect to the selected vendor is displayed to the user as

20   shown in Figure 41C. Similarly, at block 4025, in response to the user's selection of a particular weekly period being displayed in the weekly transaction report, a daily transaction report as shown in Figure 41D is displayed to the user. At block 4027, in response to the user's selection a specific day being displayed in the daily transaction report, a single day transaction report listing individual transactions is displayed as

25   shown in Figure 41E. At block 4029, in response to the user's selection of a particular transaction being displayed in the single day transaction report, a transaction summary report listing individual part items on the selected transaction is displayed to the user as shown in Figure 41F. The method 4000 proceeds to end at block 4091.

Figure 42 depicts a flow diagram of one embodiment of a process 4200 for
30   allowing a vendor to view and take appropriate actions with respect to pending transactions or activities in his account. The process 4200 starts at block 4201 and

proceeds to block 4205. At block 4205, in response to the vendor's request to view the status of pending transactions or activities, a summary status of pending transactions or activities is displayed to the vendor based upon the information retrieved from the transaction database. An example of a status summary of pending transactions and

5   activities is shown in Figure 43A. In one embodiment, as illustrated in Figure 43A, pending transactions and activities are listed in separate sections allowing the vendor to more easily locate and focus on particular transactions or activities that require his attention. The separate sections of the status summary include a section listing pending orders (pending orders section), a section listing pending stock checks (pending stock

10   checks section), a section listing pending returns (pending returns section). Pending orders are orders that require some actions by the vendor depending on the current status of the pending orders. For example, an order may be pending because there is inadequate stock to satisfy the quantity of parts ordered or because immediate delivery is requested by the purchaser, etc. Pending stock checks are stock checks submitted by the

15   purchasers that require some actions by the vendor. For example, a stock check may be pending because there is inadequate stock, because manual approval is required, or because the part inquired is invalid, etc. Pending returns are return requests submitted by the purchaser as described above that require authorizations by the vendor. At block 4209, in response to the user's selection of a specific order in the pending orders section,

20   an order summary user interface as shown in Figure 43B is displayed to allow the vendor to review the selected pending order in more detail and to take appropriate actions to process the selected pending order. For example, as shown in Figure 43B, the vendor may decide to approve or decline the selected pending order which requires immediate delivery. At block 4213, in response to the user's selection of a particular stock check

25   transaction in the pending stock checks section, a stock check summary user interface as shown in Figure 43C is displayed to allow the user to review the pending stock check in more detail and to take appropriate actions to process the pending stock check. At block 4217, in response to the user's selection of a specific return transaction in the pending returns section, a return authorization user interface is displayed as shown in Figure 43D

30   to allow the vendor to review the selected pending return request in more detail and to

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approve or decline the pending return request. The process 4200 proceeds to end at block 4291.

Figure 44 shows a flow diagram of a method 4400 for providing historical transactional information to a vendor concerning the various types of transactions that take place within a selected period. The method 4400 starts at block 4401 and proceeds to block 4405. At block 4405, in response to the vendor's request, a historical transactional activity summary is displayed to the vendor. An example of a historical transactional activity summary is shown in Figure 45A. In this example, the period is defaulted to "today" period even though the period can be defaulted to some other period, for example "this week", "this month", "last week", "last month", etc. Depending on the period selected, corresponding information will be selected and retrieved from the transaction database to construct the appropriate summary report for the period selected. In one embodiment, as shown in Figure 45A, the user is allowed to select a different period to view the historical activity summary for that period using the drop down window provided to select another period and select or click on the change view option. As shown in Figure 45A, the historical activity summary includes the customers or purchasers that have conducted transactions with the vendor during the period selected. For each customer or purchaser shown, the summary also includes various information with respect to orders, stock checks, returns, etc, At block 4409, in response to the user's selection of another period, a historical activity summary for that period is displayed to the user based upon the information retrieved from the transaction database. At block 4413, in response to the user's selection of a customer or purchaser, a historical activity summary for that particular customer or purchaser is displayed to the vendor as shown in Figure 45B, based upon the information retrieved from the transaction database. Again, as shown in Figure 45B, the vendor can also select a different period to view the historical activity summary for that period with respect to the selected customer. At block 4417, in response to the user's selection of another period using the drop down window provided, a historical activity summary for the selected period with respect to the selected customer is displayed to the vendor. At block 4421, in response to the user's selection of a particular transaction in the historical

activity summary for the selected customer, a transaction summary for the selected transaction is displayed as shown in Figure 45C.

Figure 46 shows a flow diagram of one embodiment of a method 4600 for reporting transactional information to a user of the system who is a vendor or distributor.

5   The method starts at block 4601 and proceeds to block 4605. At block 4605, in response to the user's request to perform reporting functions, a user interface as shown in Figure 47A is presented to allow the user to select or specify a reporting option. In one embodiment, as shown in Figure 47A, the user is allowed to select either a customer reporting option, a lost sales report option, or a billing verification report option. The

10   custom reporting option, if selected, will allow the user to download data from the system to create his own customized reports. The billing verification report option, if selected, will allow the user to view billing detail in his account. The lost sales report option, if selected, will allow the user to view a summary report that contains information regarding stock check request, order, and lost order detail. At decision block

15   4609, the method proceeds to block 4613 if the custom reporting option is selected, block 4615 if the lost sales report option is selected, or block 4617 if the billing verification report option is selected. At block 4613, the user is allowed to download data from the system in order to create his customized reports. In one embodiment, the user is allowed to specify various criteria or parameters that are used to select the data

20   that he wants to download. The various criteria or parameters that the user can specify for data selection include the particular database format from the available database formats (e.g., text file, Microsoft Access, Microsoft Excel, etc.), data beginning date, data ending date, data filter (e.g., data for all transactions, data for one purchaser, data for one purchaser affiliation, or data for a specific manufacturer, etc.). At block 4615, a

25   summary report containing stock check and order statistics based upon the information retrieved from the transaction database is displayed to the user. In one embodiment, as shown in Figure 47B, the summary lost sales report contains, for each month within a selected period (e.g., year-to-date), the total number of stock checks, the total number of stock checks that are unfulfilled, the total number of orders, the total number of lost

30   orders, etc.

Continuing with the present discussion, at block 4617, a monthly activity summary report by week is displayed to the user as shown in Figure 47C, based upon information retrieved from the transaction database. In one embodiment, a drill-down reporting mechanism is provided to allow the user to view or obtain more detailed

5   information regarding the summary information in the monthly activity report. At block 4619, in response to the user's selection of a particular week in the selected month, a weekly summary report for the selected week is displayed to the user as shown in Figure 47D. Similarly, at block 4621, in response to the user's selection of a particular day in the selected week, a daily detail report for the selected day as shown in Figure 47E is

10   displayed to the user. At block 4623, in response to the user's selection a specific purchaser in the daily detail report, a daily purchaser detail report listing individual transactions is displayed as shown in Figure 47F. At block 4625, in response to the user's selection of a particular transaction being displayed in the daily purchaser detail report, a transaction summary report listing individual part items on the selected

15   transaction is displayed to the user as shown in Figure 47G. The method 4600 proceeds to end at block 4691.

The invention has been described in conjunction with the preferred embodiment. It is evident that numerous alternatives, modifications, variations and uses will be apparent to those skilled in the art in light of the foregoing description.

CLAIMS

What is claimed is:

5   1.   A method of facilitating transactions between a plurality of purchasers and a
plurality of vendors connected to a centralized processing system via a computer
network, the method comprising:

          providing a first purchaser with a mechanism to submit via the computer network
                    a transaction request of a first type containing at least one part item to
10   one or more specific vendors selected by the first purchaser to receive the
                    transaction request of the first type; and
          providing the one or more specific vendors a mechanism to send to the first
                    purchaser via the computer network a transaction response to the first
                    purchaser's transaction request of the first type.

15   2.   The method of claim 1 wherein providing the first purchaser with the mechanism to
submit comprises:
          allowing the first purchaser to submit the transaction request of the first type to the
                    centralized processing system via the computer network; and
          transmitting the transaction request of the first type from the centralized processing
20   system to the one or more specific vendors selected by the first purchaser to
                    receive the transaction request of the first type via the computer network.

     3.   The method of claim 2 further comprising:
          storing the transaction request of the first type in the centralized processing system.

     4.   The method of claim 3 wherein storing comprises:
25   updating a transaction database in the centralized processing system with
                    information corresponding to the transaction request of the first type.

     5.   The method of claim 1 wherein providing the one or more specific vendors
comprises:

allowing the one or more specific vendors to submit the transaction response to

the centralized processing system via the computer network; and

transmitting the transaction response from the centralized processing system to

the first purchaser via the computer network.

5   6.   The method of claim 5 further comprising:

storing the transaction response in the centralized processing system.

7.   The method of claim 6 wherein storing comprises:

updating a transaction database in the centralized processing system with

information corresponding to the transaction response.

10   8.   The method of claim 2 wherein allowing the first purchaser to submit the

transaction request of the first type comprises:

providing the first purchaser with a user interface to construct and send the

transaction request of the first type to the centralized processing system via

the computer network.

15   9.   The method of claim 2 wherein transmitting the transaction request of the first type

comprises:

determining, for each vendor selected by the first purchaser to receive the

transaction request of the first type, the communication protocol used by the

respective vendor's computer system to exchange information with the

20   centralized processing system; and

converting the transaction request of the first type into a format compatible with the

respective vendor's computer system based upon the communication

protocol used.

10.   The method of claim 4 further comprising:

25   creating a new transaction request message in a message database in the centralized

processing system based upon the information stored in the transaction

database corresponding to the transaction request of the first type.

11.   The method of claim 7 further comprising:

creating a new transaction response message in a message database in the
        centralized processing system based upon the transaction response received
        from the one or more specific vendors.

12.   The method of claim 1 wherein the transaction request of the first type is an order
placement request and the transaction response is an order confirmation.

13.   The method of claim 1 wherein the transaction request of the first type is a stock
check request and the transaction response is a stock check response.

14.   The method of claim 1 wherein the transaction request of the first type is a
cancellation request and the transaction response is a cancellation confirmation.

15.   The method of claim 1 wherein the transaction request of the first type is a return
request and the transaction response is a return response.

16.   A method of facilitating transactions between multiple purchasers and multiple
vendors of auto parts connected to a centralized processing system via a computer network,
the method comprising:
        providing a first purchaser with a capability to submit via the centralized processing
                system an order placement request containing at least one part item to one
                or more specific vendors selected by the first purchaser to receive the order
                placement request; and
        providing the one or more specific vendors with a capability to send to the first
                purchaser via the centralized processing system a response with respect to
                the first purchaser's order placement request.

17.   The method of claim 16 wherein providing the first purchaser with the capability to
submit the order placement request comprises:
        providing the first purchaser with a capability to obtain stock check information
                with respect to the at least one part item from the one or more specific
                vendors prior to submitting the order placement request.

18.   The method of claim 17 wherein providing the first purchaser with the capability to
obtain stock check information comprises:

allowing the first purchaser to submit via the centralized processing system a stock
check request for the at least one part item to the one or more specific
vendors selected by the first purchaser to receive the stock check request;
and

5   allowing the one or more specific vendors to send to the first purchaser via the
centralized processing system a response with respect to the first
purchaser's stock check request.

19.   The method of claim 16 further comprising:
providing the first purchaser with a mechanism to submit a part query request
10   containing part query criteria to the centralized processing system to
identify the at least one part item in a part catalog.

20.   The method of claim 19 further comprising:
generating a list of part items in the part catalog matching the first purchaser's
query criteria.

15   21.   The method of claim 16 further comprising:
providing the first purchaser with a mechanism to submit a cancellation request with
respect to the at least one part item to one or more specific vendors if
cancellation of the order placement request for the at least one part item is
allowable based upon the processing status of the at least one part item.

20   22.   The method of claim 16 further comprising:
providing the first purchaser with a mechanism to submit a return request with
respect to the at least one part item to one or more specific vendors if return
of the at least one part item is allowable based upon the processing status of
the at least one part item.

25   23.   The method of claim 16 further comprising:
providing a mechanism for the first purchaser to view and update the processing
status of the at least one part item based upon transactional activities taken
by the first purchaser and the one or more specific vendors with respect to
the at least one part item.

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24.   The method of claim 16 further comprising:

        providing the first purchaser with a capability to view the processing status of the at
                least one part item and to perform one or more functions with respect to the
                at least one part item based upon its processing status.

5   25.   A method of facilitating transactions between multiple vendors and multiple
     purchasers of auto parts connected to a centralized system via a network, the method
     comprising:

                performing a catalog query function to generate a list of part items in a part catalog
                        that match search criteria specified by a first purchaser;

10   performing a stock check function to obtain and generate a list of stock check
                        responses with respect to the part items in the list that are selected by the
                        first purchaser to be stock checked; and

                performing an order placement function with respect to the part items in the list of
                        stock check responses that are selected by the first purchaser to be ordered.

15   26.   The method of claim 25 wherein performing the catalog query function comprises:

                obtaining the search criteria from the first purchaser; and

                searching the part catalog to identify the part items in the part catalog that match the
                        search criteria obtained from the first purchaser.

27.   The method of claim 26 wherein the search criteria comprise a vehicle specification.

20   28.   The method of claim 27 wherein the vehicle specification comprises information
     corresponding to the vehicle year, information corresponding to the vehicle make,
     information corresponding to the vehicle model, and information corresponding to the
     vehicle engine type.

29.   The method of claim 27 wherein obtaining the search criteria comprises:

25   obtaining the vehicle specification.

30.   The method of claim 29 wherein obtaining the vehicle specification comprises:

                presenting to the first purchaser a first list of items corresponding to a first attribute
                        of the vehicle specification; and

in response to the first purchaser's selection of one of the items in the first list,

presenting to the first purchaser a second list of items corresponding to a

second attribute of the vehicle specification.

31.   The method of claim 30 wherein the first attribute of the vehicle specification

5   corresponds to a vehicle year.

32.   The method of claim 30 wherein the second attribute of the vehicle specification

corresponds to a vehicle make.

33.   The method of claim 30 wherein the first list is displayed in a first display area and

the second list is displayed in a second display area, the first and second display areas

10   being on a same display page.

34.   The method of claim 30 further comprising:

in response to the first purchaser's selection of one of the items in the second list,

presenting to the first purchaser a third list of items corresponding to a third

attribute of the vehicle specification; and

15   in response to the first purchaser's selection of one of the items in the third list,

presenting to the first purchaser a fourth list of items corresponding to a

fourth attribute of the vehicle specification.

35.   The method of claim 34 wherein the third attribute of the vehicle specification

corresponds to a vehicle model.

20   36.   The method of claim 34 wherein the fourth attribute of the vehicle specification

corresponds to a vehicle engine type.

37.   The method of claim 34 wherein the third list is displayed in a third display area, the

fourth list is displayed in a fourth display area, the third and fourth display areas being on a

same display page.

25   38.   The method of claim 34 wherein the third and fourth lists are displayed on the same

display page as the first and second lists.

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39.   The method of claim 27 wherein the first search criteria further comprise a part specification.

40.   The method of claim 39 wherein the part specification includes a part group corresponding to a group of auto part components.

5   41.   The method of claim 39 wherein obtaining the search criteria comprises obtaining the part specification.

42.   The method of claim 41 wherein obtaining the part specification comprises:
            upon obtaining the vehicle specification, presenting to the first purchaser a list of
                applicable part groups corresponding to the vehicle specification.

10   43.   The method of claim 42 wherein presenting the list of applicable part groups comprises:
                searching a database to identify the part groups corresponding to the vehicle
                specification specified by the first purchaser.

44.   The method of claim 43 wherein the vehicle specification comprises the vehicle
15   year, the vehicle make, the vehicle model, and the vehicle engine type.

45.   The method of claim 42 further comprising:
            in response to the first purchaser's selection of a specific part group in the list of
                applicable part groups, presenting a list of applicable part subgroups
                corresponding to the specific part group selected by the first purchaser.

20   46.   The method of claim 45 wherein presenting the list of applicable part subgroups comprises:
                searching a database to identify the part subgroups corresponding to the specific
                part group selected by the first purchaser.

47.   The method of claim 46 further comprising:
25   in response to the first purchaser's selection of a specific part subgroup in the list
                of part subgroups, retrieving the part items in the part catalog corresponding
                to the specific part subgroup selected by the first purchaser.

48.   The method of claim 47 further comprising:

presenting to the first purchaser the part items retrieved from the first catalog if the
number of part items retrieved does not exceed a predetermined number.

49.   The method of claim 48 wherein presenting the part items retrieved from the first

5   catalog comprises:

sorting the part items according to a predetermined sort order.

50.   The method of claim 49 wherein the part items are sorted by manufacturer
identifiers.

51.   The method of claim 50 wherein each manufacturer identifier comprises a

10   manufacturer line code.

52.   The method of claim 49 wherein the part items are sorted by part descriptions
corresponding to the part items.

53.   The method of claim 48 further comprising:

if the number of part items retrieved exceeds the predetermined number, presenting

15   a list of non-redundant part descriptions based upon the part items retrieved

from the part catalog, each part item retrieved from the part catalog

containing a corresponding part description.

54.   The method of claim 53 wherein presenting the list of non-redundant part
descriptions comprises:

20   consolidating the part descriptions extracted from the part entries to remove

redundant part descriptions.

55.   The method of claim 54 further comprising:

in response to the first purchaser's selection of one or more part descriptions in the

list, presenting the part items retrieved from the part catalog that correspond

25   to the one or more part descriptions selected by the first purchaser.

56.   The method of claim 26 wherein the search criteria comprise a part number.

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57.   The method of claim 56 wherein obtaining the search criteria comprises obtaining the part number.

·58.   The method of claim 57 wherein obtaining the part number comprises:
        providing the first purchaser with a user interface to enter the part number.

5   59.   The method of claim 56 wherein the search criteria further comprise a manufacturer line code.

60.   The method of claim 59 wherein obtaining the search criteria comprises obtaining the manufacturer line code.

61.   The method of claim 60 wherein obtaining the manufacturer line code comprises:
10   providing the first purchaser with a user interface to optionally enter the
                manufacturer line code.

62.   The method of claim 61 further comprising:
        if the manufacturer line code is entered by the first purchaser, verifying that the
                manufacturer line code entered by the first purchaser is valid.

15   63.   The method of claim 60 wherein obtaining the manufacturer line code comprises:
        providing the first purchaser with a mechanism to select the manufacturer line code.

64.   The method of claim 63 wherein providing the first purchaser with the mechanism
to select the manufacturer line code comprises:
        presenting to the first purchaser an alphabetical list;
20   in response to the first purchaser's selection of a specific letter in the alphabetical
                list, presenting to the first purchaser a list of manufacturers whose
                identifiers beginning with the specific letter selected by the first purchaser;
                and
        in response to the first purchaser' selection of a specific manufacturer, presenting
25   to the first purchaser a list of manufacturer line codes corresponding to the
                specific manufacturer selected by the first purchaser.

65.   The method of claim 59 further comprising:

searching the part catalog for part items that match the part number and the
manufacturer line code provided by the first purchaser; and

presenting the part items from the part catalog that match the part number and the

5   manufacturer line code provided by the first purchaser.

66.   The method of claim 65 wherein presenting the part items comprises:

sorting the part items according to a specified sort order.

67.   The method of claim 65 further comprising:

if there are no part items in the part catalog matching the part number and the

10   manufacturer line code provided by the first purchaser, performing a special
stock check function.

68.   The method of claim 67 wherein performing the special stock check function
comprises:

informing the first purchaser that there is no part item in the part catalog matching

15   the part number and the manufacturer line code provided by the first
purchaser; and

providing the first purchaser with a mechanism to perform a stock check on the
specific part identified by the part number and the manufacturer line code
provided by the first purchaser.

20   69. The method of claim 68 wherein providing the first purchaser with the mechanism
comprises:

allowing the first purchaser to specify one or more vendors to which a stock check
request on the specific part is to be sent.

70.   The method of claim 69 wherein allowing comprises:

25   presenting to the first purchaser a first list of vendors pre-selected by the first
purchaser as vendors of first choice.

71.   The method of claim 70 further comprising:

providing the first purchaser with a mechanism to select a different list of vendors.

72.   The method of claim 25 further comprising:

providing the first purchaser with a mechanism to select one or more specific part
items to be stock checked from the list of part items matching the search
criteria specified by the first purchaser.

5   73.   The method of claim 72 further comprising:

for each part item selected to be stock checked, providing the first purchaser with a
mechanism to select one or more specific vendors to whom a stock check
request for the respective part item is to be sent.

74.   The method of claim 73 wherein providing comprises:

10   presenting to the first purchaser a list of the one or more specific vendors in a
specified order; and

indicating that the one or more specific vendors have been identified as the vendors
that carry the manufacturer product line to which the respective part item
belongs.

15   75.   The method of claim 74 further comprising:

providing the first purchaser with a mechanism to select another set of vendors.

76.   The method of claim 26 further comprising:

presenting the part items in a specified sort order; and

for each part item being presented, showing in a specified order a predetermined set
20   of vendors according to a vendor selection scheme indicated by the first
purchaser.

77.   The method of claim 76 further comprising:

determining the specified sort order in which the part items are presented;

determining the type of vendors to whom the first purchaser wants to submit a
25   stock check request;

determining the order in which the vendors are to be presented.

78.   The method of claim 76 further comprising:

allowing the first purchaser to specify the sort order in which the part items are to
be presented;

allowing the first purchaser to specify which type of vendors are to be presented; and

allowing the first purchaser to specify the order in which the vendors are to be presented.

79. The method of claim 25 wherein performing the stock check function comprises:

allowing the first purchaser to select one or more specific part items to be stock checked from the list of part items matching the search criteria specified by the first purchaser; and

for each part item selected by the first purchaser to be stock checked, allowing the first purchaser to specify one or more vendors to whom a stock check request for the part item selected is to be submitted.

80. The method of claim 79 wherein allowing the first purchaser to select one or more part items comprises:

presenting to the first purchaser the list of part items retrieved from the part catalog that match the search criteria specified by the first purchaser; and

for each part item in the list, providing the first purchaser with a mechanism to individually select the respective part item to be stock checked.

81. The method of claim 80 wherein providing the first purchaser with the mechanism to individually select comprises:

presenting a selectable indicator in connection with the respective part item, the selectable indicator when marked by the first purchaser indicating that the corresponding part item is to be stock checked.

82. The method of claim 80 wherein allowing the first purchaser to specify one or more vendors comprises:

allowing the first purchaser to select a list of vendors of a particular type; and

for each part entry being presented, showing the list of vendors selected by the first purchaser.

83. The method of claim 82 wherein showing the list of vendors comprises:

presenting the list of vendors according to a display order specified by the first purchaser.

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84.   The method of claim 83 further comprising:

providing the first purchaser with a mechanism to individually select one or more
vendors from the list of vendors presented as the vendors to whom a stock
check request for the selected part item is to be submitted.

5   85.   The method of claim 83 further comprising:

indicating to the first purchaser which vendors in the list are the vendors that carry
the particular product line to which the respective part item belongs.

86.   The method of claim 85 wherein indicating comprises:

for each part item being presented, showing a selectable indicator in connection with
10   the vendor identifier being presented to indicate that the respective vendor
carries the particular part product line to which the respective part item
belongs.

87.   The method of claim 79 further comprising:

preparing one or more stock check requests based upon the first purchaser's
15   selections;

storing the one or more stock check requests in a transaction database; and

submitting the one or more stock check requests to the vendors selected by the first
purchaser.

88.   The method of claim 87 wherein preparing the one or more stock check requests
20   comprises:

determining the part items that are selected by the first purchaser to be stock
checked;

determining, for each part item selected by the first purchaser to be stock checked,
the vendors that are selected by the first purchaser to whom the stock check
25   request for the selected part item is to be submitted; and

constructing the one or more stock check requests based upon the part items and
the vendors selected by the first purchaser.

89.   The method of claim 87 wherein submitting the one or more stock check requests
to the vendors selected comprises:

30   transmitting electronically the one or more stock check requests to the selected
vendors at their corresponding network addresses.

90.   The method of claim 87 wherein submitting the one or more stock check requests comprises:

converting the stock check requests into formats compatible with the selected vendors' systems.

5   91.   The method of claim 90 wherein converting comprises:

generating stock query messages based upon the stock check requests information;

sending the stock query messages to a response server that is configured to process stock query messages at the corresponding vendor's system.

92.   The method of claim 90 wherein converting comprises:

10   generating stock query messages based upon the stock check requests information; and

converting the stock query messages into interactive scripts used to invoke functions in the vendor's system via a terminal session.

93.   The method of claim 79 further comprising:

15   receiving stock check responses from the vendors with respect to the one or more stock check requests submitted; and

presenting the stock check responses to the first purchaser.

94.   The method of claim 93 wherein presenting the stock check responses comprises:

sorting the stock check responses according to a sorting scheme selected by the

20   first purchaser.

95.   The method of claim 95 wherein the stock check response comprises the part information including the manufacturer product line, part number, and the part description.

96.   The method of claim 93 wherein the stock check response further comprises the part cost and the part availability information, the part availability information comprising

25   quantity information indicating how many units of the respective part item are available on hand.

97.   The method of claim 96 wherein the part cost and the part availability information for each part item are provided for each vendor in the list.

98.   The method of claim 97 wherein the vendors in the list are presented in an order specified by the first purchaser.

5   99.   The method of claim 98 wherein the vendors are presented in a horizontal display order with the highest ranking vendor being presented in the left-most available column and the lowest ranking vendor being displayed in the right-most available column.

100.   The method of claim 25 wherein performing the order placement function comprises:

10   allowing the first purchaser to select one or more specific part items to be ordered
                 from the list of stock check responses; and
            for each part item selected by the first purchaser to be ordered, allowing the first
                 purchaser to specify one or more vendors to whom an order request for the
                 part item selected is to be submitted.

15   101.   The method of claim 100 wherein allowing the first purchaser to select one or more
part items comprises:
            presenting to the first purchaser the list of stock check responses; and
            for each part item in the list, providing the first purchaser with a mechanism to
                 individually select the respective part item to be ordered.

20   102.   The method of claim 101 wherein providing the first purchaser with the mechanism
to individually select comprises:
            presenting a selectable indicator in connection with the respective part item being
                 presented, the selectable indicator when marked by the first purchaser
                 indicating that the corresponding part item is to be ordered;

25   103.   The method of claim 102 wherein allowing the first purchaser to specify one or
more vendors comprises:
            for each part item in the list of stock check responses, showing the vendors from
                 whom the stock check response for the respective part item has been
                 received; and

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provideing the first purchaser with a mechanism to individually select one or more

vendors being shown to whom an order request for the selected part item is

to be submitted.

104.   The method of claim 103 wherein showing the vendors comprises:

5   presenting the vendors according to a display order specified by the first purchaser.

105.   The method of claim 103 wherein providing the first purchaser with a mechanism

comprises:

presenting a selectable indicator for each vendor being shown, the selectable

indicator when marked by the first purchaser indicating that the

10   corresponding vendor is the vendor to whom the order for the selected part

item is to be submitted.

106.   The method of claim 100 further comprising:

preparing one or more part order requests based upon the first purchaser's

selections;

15   storing the one or more part order requests in a transaction database; and

submitting the one or more part order requests to the vendors selected by the first

purchaser.

107.   The method of claim 106 wherein preparing the one or more part order requests

comprises:

20   determining the part items that are selected by the first purchaser to be ordered;

determining, for each part item selected by the first purchaser to be ordered, the

vendors that are selected by the first purchaser to whom the part order

request is to be submitted; and

constructing the one or more part order requests based upon the part items and the

25   vendors selected by the first purchaser.

108.   The method of claim 107 wherein submitting the one or more part order requests to

the vendors selected comprises:

transmitting electronically the one or more part order requests to the selected

vendors at their corresponding network addresses.

109.   The method of claim 108 wherein submitting the one or more part order requests comprises:

            converting the part order requests into formats compatible with the selected
                    vendors' systems.

5 110.   The method of claim 109 wherein converting comprises:
            generating part order messages based upon the part order requests information;
            sending the part order messages to a response server that is configured to process
                    part order messages at the vendor's system.

111.   The method of claim 109 wherein converting comprises:
10   generating part order messages based upon part order requests information; and
            converting the part order messages into interactive scripts used to invoke functions
                    in the vendor's system via a terminal session.

112.   The method of claim 106 further comprising:
            receiving part order confirmations from the vendors with respect to the one or more
15   part order requests submitted; and
            presenting the part order confirmations to the first purchaser.

113.   The method of claim 112 wherein presenting the part order confirmations comprises:

            sorting the part order confirmations according to a sorting scheme selected by the
20   first purchaser.

114.   The method of claim 100 further comprising:
            presenting an order summary containing part orders requested by the first
                    purchaser.

115.   The method of claim 114 further comprising:
25   allowing the first purchaser to specify which part items in the order summary are to
                    be sent to the vendors.

116.   The method of claim 114 further comprising:

allowing the first purchaser to specify, for each part item to be ordered, a time frame
for the delivery of the part item ordered.

117.   The method of claim 25 further comprising:
        performing a cancellation function in response to the first purchaser's cancellation
5   request.

118.   The method of claim 117 wherein performing the cancellation function comprises:
        providing the first purchaser with a capability to review outstanding part order
                requests; and
        for each outstanding part order requests, providing the first purchaser with a
10   mechanism to submit a cancellation request with respect to one or more
                specific part items on the respective part order request.

119.   The method of claim 118 wherein providing the first purchaser with the capability
to review outstanding part order requests comprises:
        presenting a list of part order requests submitted by the first purchaser.

15 120.   The method of claim 119 wherein providing the first purchaser with the mechanism
comprises:
        for each part order request listed, presenting a selectable indicator in connection
                with the respective part order listed, the selectable indicator when marked
                indicating that the corresponding part order is to be cancelled.

20 121.   The method of claim 120 further comprising:
        determining which part items are selected by the first purchaser to be cancelled;
        preparing one or more cancellation requests based upon the first purchaser's
                selections;
        storing the one or more cancellation requests in a transaction database; and
25   submitting the one or more cancellation requests to the corresponding vendors.

122.   The method of claim 121 wherein submitting the one or more cancellation requests
comprises:
        electronically transmitting the one or more cancellation requests to the
                corresponding vendors at their corresponding network addresses.

123.   The method of claim 122 wherein submitting the one or more cancellation requests comprises:

    converting the one or more cancellation requests into formats compatible with the selected vendors' systems.

5   124.   The method of claim 122 wherein converting comprises:

    generating cancellation messages based upon the one or more cancellation requests information;

    sending the cancellation messages to a response server that is configured to process cancellation messages at the vendor's system.

10   125.   The method of claim 122 wherein converting comprises:

    generating cancellation messages based upon the one or more cancellation requests information; and

    converting the cancellation messages into interactive scripts used to invoke functions in the vendor's system via a terminal session.

15   126.   The method of claim 121 further comprising:

    receiving cancellation confirmation information from the vendors with respect to the one or more cancellation requests submitted; and

    presenting the cancellation confirmation information to the first purchaser.

127.   The method of claim 25 further comprising:

20   performing an order status function in response to the first purchaser's order status request.

128.   The method of claim 127 wherein performing the order status function comprises:

    providing the first purchaser with a mechanism to review outstanding part orders submitted by the first purchaser each containing one or more part items;

25   providing the first purchaser with a capability to individually select one or more part items the status of which is to be requested; and

    submitting one or more order status requests to corresponding vendors based upon the first purchaser's selections.

129. The method of claim 128 wherein providing the first purchaser with the capability to review outstanding part orders comprises:

    presenting a list of part orders submitted by the first purchaser in an order specified by the first purchaser.

5   130. The method of claim 128 wherein providing the first purchaser with the capability to individually select comprises:

    for each part item on each respective part order, presenting a selectable indicator in connection with the respective part item, the selectable indicator when marked indicating that the corresponding status for the respective part item
10   is to be requested from the corresponding vendor.

131. The method of claim 130 wherein submitting the order status requests comprises:
determining which part items are selected by the first purchaser;
for each part item selected by the first purchaser, preparing a status request to be submitted to the corresponding vendor;
15   storing the status requests in a transaction database; and
submitting the status requests to the corresponding vendor.

132. The method of claim 131 wherein submitting the status requests comprises:
electronically transmitting the status requests to the corresponding vendors at their corresponding network addresses.

20   133. The method of claim 132 wherein submitting the status requests comprises:
converting the status requests into formats compatible with the selected vendors' systems.

134. The method of claim 133 wherein converting comprises:
generating status messages based upon the status requests information;
25   sending the status messages to a response server that is configured to process status messages at the vendor's system.

135. The method of claim 133 wherein converting comprises:
generating status messages based upon status requests information; and
converting the status messages into interactive scripts used to invoke functions in
30   the vendor's system via a terminal session.

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136.   The method of claim 131 further comprising:
  receiving status response information from the vendors with respect to the status
    requests submitted; and
  presenting the status response information to the first purchaser.

5 137.   The method of claim 25 further comprising:
  performing a part return function in response to the first purchaser's part return
    request.

138.   The method of claim 137 wherein performing the part return function comprises:
  providing the first purchaser with a capability to individually select one or more part
10   orders containing one or more part items to be returned;
  providing the first purchaser with a capability to individually select, from each part
    order specified, one or more part items to be returned; and
  submitting one or more part return requests based upon the first purchaser's
    selections.

15 139.   The method of claim 138 wherein providing the first purchaser with the capability
to individually select the one or more part orders comprises:
  presenting a list of part orders submitted by the first purchaser in an order specified
    by the first purchaser.

140.   The method of claim 138 wherein providing the first purchaser with the capability
20 to individually select the one or more part items to be returned comprises:
  for each part item listed, presenting a selectable indicator in connection with the
    respective part item listed, the selectable indicator when marked indicating
    that the respective part item is to be returned.

141.   The method of claim 138 wherein submitting the part return requests for the part
25 items selected comprises:
  determining the part items selected by the first purchaser to be returned;
  preparing one or more part return requests to be submitted to the corresponding
    vendors based upon the first purchaser's selections; and
  storing the part return requests in a transaction database.

142.   The method of claim 138 wherein submitting the part return requests comprises:

transmitting electronically the part return requests to the corresponding vendors at their corresponding network addresses.

143.   The method of claim 138 wherein submitting the one or more part return requests comprises:

converting the part return requests into formats compatible with the selected vendors' systems.

144.   The method of claim 143 wherein converting comprises:

generating part return request messages based upon the part return requests information;

sending the part return request messages to a response server that is configured to process part return messages at the vendor's system.

145.   The method of claim 143 wherein converting comprises:

generating part return request messages based upon part return requests information; and

converting the part return messages into interactive scripts used to invoke functions in the vendor's system via a terminal session.

146.   The method of claim 138 further comprising:

receiving the return authorizations from the vendors with respect to the part return requests; and

presenting the return authorizations to the first purchaser.

147.   The method of claim 25 further comprising:

performing a status information update function in response to the first purchaser's request.

148.   The method of claim 147 wherein performing the status information update function comprises:

presenting a list vendors with which the first purchaser has placed one or more part orders;

in response to the first purchaser's selection of a particular vendor in the list,
presenting a list containing part items ordered from the particular vendor;

providing the first purchaser with a mechanism to individually select each part item
in the list to indicate that the respective part item has been received by the
first purchaser; and

in response the first purchaser's update request, updating the delivery status of the
selected part item to reflect that the respective part item has been received.

149.   The method of claim 148 further comprising:

providing the first purchaser with a mechanism to individually select each part item
in the list to indicate that a core for the respective part item has been
returned; and

in response to first purchaser's update request, updating the core return status of
the selected part item to reflect that the core for the respective part item has
been returned.

150.   The method of claim 148 further comprising:

providing the first purchaser with a mechanism to individually select each part item
in the list to indicate that the respective part item has been returned to the
corresponding vendor; and

in response to the first purchaser's update request, updating the part return status of
the selected part item to reflect that the respective part item has been
returned.

151.   The method of claim 25 further comprising:

in response to a report request, performing a transaction reporting function.

152.   The method of claim 151 wherein performing the transaction reporting function
comprises:

generating a transaction summary report for a first period, the transaction summary
report for the first period containing a list of vendors and transactional data
for each vendor in the list; and

in response to the user's selection of a specific vendor in the list, generating a
transaction summary report for the selected vendor containing a list of
second periods and transactional data for each second period in the list, each
second period corresponding to a duration within the first period.

153.   The method of claim 152 further comprising:

in response to the user's selection of a specific second period, generating a

transaction summary report for the selected vendor with respect to the

selected second period containing a list of third periods and transactional

5   data for each third period in the list, each third period corresponding to a

duration within the selected second period.

154.   The method of claim 153 further comprising:

in response to the user's selection of a specific third period, generating a

transaction summary report for the selected vendor with respect to the

10   selected third period containing a list of transactions conducted within the

selected third period.

155.   The method of claim 154 further comprising:

in response to the user's selection of a specific transaction in the list, generating a

transaction summary report for the selected transaction containing

15   individual part items on the selected transaction.

156.   The method of claim 25 further comprising:

in response to a user's request to review status of transactions in the user's

account, generating a summary listing of transactions in the user's account,

the summary listing containing a transaction identifier and a current status

20   for each transaction; and

allowing the user to perform one or more specific functions with respect to each

transaction in the summary listing based upon the current status of each

transaction.

157.   The method of claim 156 wherein the summary listing further comprising a vendor

25   identifier for each transaction.

158.   The method of claim 156 wherein allowing the user to perform one or more specific

functions comprises:

allowing the user to cancel transactions that have not been accepted by the

corresponding vendors.

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159.   The method of claim 156 wherein allowing comprises:

in response to the user's selection of a specific vendor identifier in the summary
listing, providing the user with detailed information about the selected
vendor.

5   160.   The method of claim 156 wherein allowing comprises:

in response to the user's selection of a particular transaction identifier in the
summary listing, providing a transaction status history for each part item
associated with the selected transaction.

161.   The method of claim 156 further comprising:

10   for each part item associated with the selected transaction, allowing the user to
perform a first function if the respective part item is in a first status and a
second function if the respective part item is in a second status.

162.   The method of claim 161 wherein the first status indicates that cancellation of an
order placement request for the respective part item is allowable and the first function

15   comprises generating a cancellation request for the respective part item.

163.   The method of claim 1161 wherein the second status indicates that a return of the
respective part item to the vendor is allowable and the second function comprises
generating a return request for the respective part item.

164.   A system for facilitating various types of transactions between a plurality of

20   purchaser and a plurality of vendors connected to the system via a computer network, the
system comprising:

a first server to receive a transaction request of a first type from a user via the
computer network;
a transaction database to store the transaction request of the first type; and

25   a vendor system interface to transmit the transaction request of the first type via the
computer network to one or more vendors selected by the user to receive the
transaction request of the first type.

165.   The system of claim 164 wherein the vendor system interface is further configured to receive via the computer network a transaction response with respect to the transaction request from the one or more selected vendors.

166.   The system of claim 165 wherein the transaction database is further configured to store the transaction response received from the one or more vendors.

167.   The system of claim 166 wherein the first server is further configured to transmit the transaction response stored in the transaction database to the user via the computer network.

168.   The system of claim 167 further comprising:
        database update logic to update the transaction database with the information
            associated with the transaction request.

169.   The system of claim 168 further comprising:
        a message database to store a transaction request message based upon the
            transaction request stored in the transaction database.

170.   The system of claim 169 wherein the vendor system interface uses the transaction request message stored in the message database to perform its corresponding function.

171.   The system of claim 170 wherein the message database is further configured to store a transaction response message based upon the transaction response received.

172.   The system of claim 171 wherein the vendor system interface is further configured to create the transaction response message upon receiving the transaction response.

173.   The system of claim 171 wherein the transaction response message is used by the database update logic to update the transaction database.

174.   A system for facilitating transactions between multiple purchasers and vendors connected to the system via a network, the system comprising:
        first programming logic to facilitate new transactions between the purchasers and
            vendors, the first programming logic comprising:

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part query logic to search a part catalog and present to a user a part list
containing part items based upon a part query request submitted
by the user;

stock check logic to obtain and present to the user a stock check response

5   list containing stock check information with respect to one or more
part items from the part list that are selected by the user to be
stock checked; and

order placement logic to submit an order placement request to each vendor
selected by the user, the order placement request containing one or

10   more part items that are selected by the user from the response list
to be ordered.

175.   The system of claim 174 wherein the part query logic comprises:
logic to receive the part query request from the user;
logic to search the part catalog to identify and retrieve part items in the part catalog

15   that match query criteria specified in the part query request; and
logic to generate and present the part list to the user based upon the part items that
match the query criteria.

176.   The system of claim 175 wherein the logic to receive the part query request
comprises:

20   logic to allow the user to construct the part query request based upon
vehicle and part information.

177.   The system of claim 175 wherein the logic to receive the part query request
comprises:
logic to allow the user to construct the part query request based upon part number

25   and manufacturer information.

178.   The system of claim 177 wherein the logic to allow the user to construct comprises:
logic to allow the user to specify the vehicle information using selectable lists; and
logic to allow the user to specify the part information using selectable lists.

179.   The system of claim 174 wherein the stock check logic comprises:

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logic to allow the user to select one or more specific part items to be stock checked
from the part list; and

logic to allow the user to specify, for each part item selected by the user to be stock
checked, one or more vendors to whom a stock check request for the
5   respective part item is to be submitted.

180.   The system of claim 174 wherein the order placement function comprises:

logic to allow the user to select one or more specific part items to be ordered from
the stock check response list; and

logic to allow the user to specify, for each part item selected by the user to be
10   ordered, one or more vendors to whom an order placement request for the
respective part item is to be submitted.

181.   The system of claim 174 further comprising:

second programming logic to facilitate existing transactions between the purchasers
and vendors, the second programming logic comprising:

15   logic to perform a cancellation function in response to the user's request;
and

logic to perform a return function in response to the user's request.

182.   The system of claim 174 wherein logic to perform the cancellation function
comprises:

20   logic to allow the user to view outstanding part orders submitted by the user; and
logic to allow the user to select one or more part items to be cancelled from one or
more part orders.

183.   The system of claim 174 wherein logic to perform the return function comprises:
logic to allow the user to view outstanding part orders submitted by the user; and
25   logic to allow the user to select one or more part items to be returned from one or
more part orders.

184.   A machine-readable medium comprising instructions which, when executed by a
machine, cause the machine to perform the steps of:

receiving a transaction request of a first type from a user via the computer network;
30   storing the transaction request of the first type; and

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transmitting the transaction request of the first type via the computer network to one
   or more vendors selected by the user to receive the transaction request of the
   first type.

185.   The machine-readable medium of claim 184 further comprising:

5   receiving a transaction response with respect to the transaction request from the one
          or more selected vendors.

186.   The machine-readable medium of claim 185 further comprising:
       storing the transaction response received from the one or more selected vendors.

187.   The machine-readable medium of claim 186 further comprising:

10   transmitting the transaction response to the user via the computer network.

188.   A machine-readable medium comprising instructions which, when executed by a
machine, causes the machine to perform the steps of:
       performing a catalog query function to generate a list of part items in a part catalog
          that match search criteria specified by a first purchaser;

15   performing a stock check function to obtain and generate a list of stock check
          responses with respect to the part items in the list that are selected by the
          first purchaser to be stock checked; and
       performing an order placement function with respect to the part items in the list of
          stock check responses that are selected by the first purchaser to be ordered.

20 189.   The machine-readable medium of claim 187 wherein performing the catalog query
function comprises:
       obtaining the search criteria from the first purchaser; and
       searching the part catalog to identify the part items in the part catalog that match the
          search criteria obtained from the first purchaser.

25 190.   The machine-readable medium of claim 189 further comprising:
       presenting to the first purchaser the list of part items from the part catalog that
          match the search criteria specified by the first purchaser.

191.   The machine-readable medium of claim 187 wherein performing the stock check function comprises:

        allowing the first purchaser to select one or more specific part items to be stock checked from the list of part items matching the search criteria specified by the first purchaser; and

        for each part item selected by the first purchaser to be stock checked, allowing the first purchaser to specify one or more vendors to whom a stock check request for the part item selected is to be submitted.

192.   The machine-readable medium of claim 191 wherein allowing the first purchaser to select one or more part items comprises:

        presenting to the first purchaser the list of part items retrieved from the part catalog that match the search criteria specified by the first purchaser; and

        for each part item in the list, providing the first purchaser with a mechanism to individually select the respective part item to be stock checked.

193.   The machine-readable medium of claim 192 further comprising:

        preparing one or more stock check requests based upon the first purchaser's selections;

        storing the one or more stock check requests in a transaction database; and

        submitting the one or more stock check requests to the vendors selected by the first purchaser.

194.   The machine-readable medium of claim 193 further comprising:

        receiving stock check responses from the vendors with respect to the one or more stock check requests submitted; and

        presenting the stock check responses to the first purchaser.

195.   The machine-readable medium of claim 188 wherein performing the order placement function comprises:

        allowing the first purchaser to select one or more specific part items to be ordered from the list of stock check responses; and

        for each part item selected by the first purchaser to be ordered, allowing the first purchaser to specify one or more vendors to whom an order request for the part item selected is to be submitted.
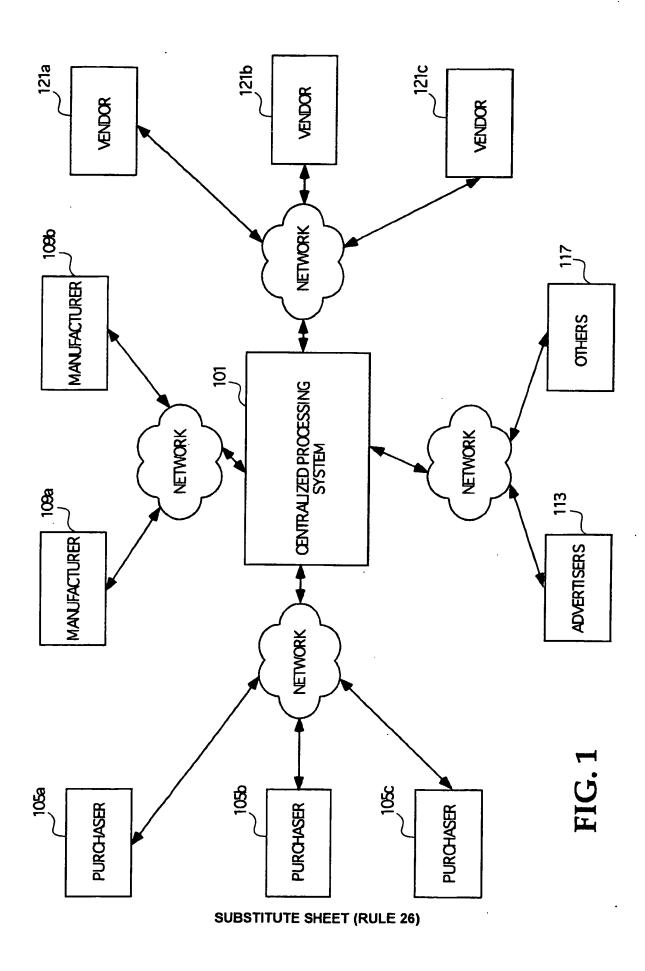
196.   The machine-readable medium of claim 195 wherein allowing the first purchaser to select one or more part items comprises:

presenting to the first purchaser the list of stock check responses; and

for each part item in the list, providing the first purchaser with a mechanism to individually select the respective part item to be ordered.

197.   The machine-readable medium of claim 196 further comprising:

preparing one or more part order requests based upon the first purchaser's selections;

storing the one or more part order requests in a transaction database; and

submitting the one or more part order requests to the vendors selected by the first purchaser.

198.   The machine-readable medium of claim 197 further comprising:

receiving order confirmations from the vendors with respect to the one or more part order requests submitted; and

presenting the order confirmations to the first purchaser.

199.   The machine-readable medium of claim 188 further comprising:

performing a cancellation function in response to the first purchaser's cancellation request.

200.   The machine-readable medium of claim 188 further comprising:

performing an order status function in response to the first purchaser's order status request.

201.   The machine-readable medium of claim 188 further comprising:

performing a part return function in response to the first purchaser's part return request.

FIG. 1

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FIG. 2

FIG. 3

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VENDOR INFORMATION:
    COMPANY INFORMATION
    SERVICES INFORMATION
    USER AUTHENTICATION INFORMATION
    MANUFACTURE/LINE INFORMATION
    PARTS SUB-GROUP INFORMATION
    CUSTOMER INFORMATION
    ETC.

405

PURCHASER INFORMATION:
    PURCHASER ACCOUNT INFORMATION
    USER LOGIN INFORMATION
    VENDOR SELECTION AND VENDOR TYPE (LOCAL
    AND   WILL-SHIP)
    VENDOR DISPLAY ORDER PREFERENCES
    PRICE DISPLAY PREFERENCES
    ETC.

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451

JOB INFORMATION	RETURN REQUESTS
455	481
STOCK CHECK REQUESTS	RETURN AUTHORIZATIONS
459	485
STOCK CHECK RESPONSES	RETURN CONFIRMATIONS
463	493
ORDER REQUESTS	ETC.
467	497
ORDER CONFIRMATIONS	
471	
CANCELLATION REQUESTS	
475	
CANCELLATION CONFIRMATIONS	
479	

FIG. 4

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FIG. 5

FIG. 6

233

ORDERS

| Message Type |
OrderID
PurchaserID
SupplierID
SupplierBranchID
JobID
PurCustNo
PurOrderNo
PurWorkOrderNo
YMMEQ
ReqShipComp

701

REQUEST-ITEMS

| Message Type |
| OrderID |
ItemID
MfgLine
PartNo
UM
QtyRequired
TimeStamp

711

STOCK CHECK RESPONSES

| OrderID |
ItemNo
MfgLine
PartNo
SupplierID
Cost
ListPrice
CoreCost
UM
QtyAvail
MinOrderQty
QtyOnOrder
PopularityCode
AlternatePart
SubstitutePart
TimeStamp

721

ORDER RESPONSES

| OrderNo |
ItemID
MfgLine
PartNo
SupplierID
SupplierInvoiceNo
SupplierItemID
Cost
CoreCost
ListPrice
HoldQty
OrderQty
BackOrderQty
ReturnedQty
CancellationQty
TimeStamp

731

COMMENTS

| OrderID |
ItemID
CommentType
CommentText
TimeStamp

741

FIG. 7

SUBSTITUTE SHEET (RULE 26)

FIG. 8

FIG. 9

FIG. 10

**Data Store
(DBMS, MSMQ, etc)**

1101

RSI DISPATCHER

RSI DISPATCHER

RSI DISPATCHER

Data Access Module   1112

XML Reader Module

1110

Parse XML Messages from
XML into a format ready
to be stored into data store.

1120

Communication Module

Communication routines
to talk to vendor systems
(to: TCP/IP, etc)

XML Writer Module

Build XML messages from
the data read from data store
internal data formats.

1114

Functionality:
1. Access a data store (to: DSMS, MSMQ).
2. Convert the data to/from XML messages.

VENDOR Response Server

FIG. 11

FIG. 12

START — 1301

USER LOGS IN
TO SYSTEM — 1305

IS USER
REGISTERED
? — 1309

NO → PERFORM
ACCOUNT
REGISTRATION
FUNCTION — 1313

YES

DISPLAY SYSTEM
DEFAULT MENU

USER INITIATES
AN ACTIVITY

WHICH
ACTIVITY
?

NEW ORDER → PERFORM NEW
ORDER
PROCESSING
FUNCTION

EXISTING → PERFORM
EXISTING
ORDER
PROCESSING
FUNCTION

REPORT → PERFORM
REPORTING
FUNCTION

ACCOUNT
UPDATE → PERFORM
ACCOUNT
UPDATE
FUNCTION

OTHER → PERFORM
OTHER
FUNCTIONS

MORE
ACTIVITIES
?

YES

NO

END

FIG. 13

START ~1401

DISPLAY PURCHASER ACCOUNT INFO UI ~1405

OBTAIN PURCHASER ACCOUNT USER INFO ~1407

DISPLAY PURCHASER USER INFO UI ~1409

OBTAIN PURCHASER USER INFO ~1411

DISPLAY ACCOUNT USER SUMMARY ~1413

DISPLAY LOCAL VENDOR SELECTION UI ~1415

OBTAIN LOCAL VENDOR SELECTION INFO ~1417

DISPLAY LOCAL VENDOR SELECTION SUMMARY ~1419

DISPLAY WILL-SHIP VENDOR SELECTION UI ~1421

OBTAIN WILL-SHIP VENDOR SELECTION INFO ~1423

DISPLAY WILL-SHIP VENDOR SELECTION SUMMARY ~1425

DISPLAY SUMMARY OF SELECTED VENDORS ~1427

OBTAIN DISPLAY PRIORITY INFO IF SPECIFIED BY PURCHASER ~1429

DISPLAY VENDOR PRICE DISPLAY PREFERENCES UI ~1431

OBTAIN VENDOR PRICE DISPLAY PREFERENCES SPECIFIED BY PURCHASER ~1433

DISPLAY VENDOR DEFAULT DISPLAY PREFERENCE ~1435

OBTAIN VENDOR DEFAULT DISPLAY PREFERENCE ~1437

STORE/UPDATE PURCHASER PROFILE INFO IN DB ~1439

END ~1441

FIG. 14

PURCHASER ACCOUNT INFORMATION

Shop Information

Shop Name

Contact Name

Telephone

FAX Number

Email

Address

City

State

Zip

Your Metropolitan Area   -Select A Metropolitan Area-   ▼

Country

Franchise Affiliations
Select Only If
Applicable.   None   ▼

                If Not On Our List, Please Add Your Franchiser

Corporate Ownership
Select Only If
Applicable.   None   ▼ Branch ID

                If Not On Our List, Please Add The Name Of The Corporation That Owns Your Shop

Corporate ID #

Associate #

Continue With Account Registration

FIG. 15A

Primary User Login Information

User Name

Password

Re-Enter Password

Permission Level   Un-Restricted

You need to enter an Administrative Username and Password
that will give you authority to change your account profile settings.
Please enter them below.

Admin User Name

Admin Password

Re Enter Password

Permission Level   Administrative

        Add Additional User(s)   Finished Adding Users

FIG. 15B

Account User Summary

Delete	Employee Name	User Name	Password	Permission Level

	John Watson	jwil	jabba1	● Admin Unrestricted Restricted
	Fred Jones	freddy	qwerty	Admin ●Unrestricted Restricted
	Greg Roberts	gman	password	Admin ●Unrestricted Restricted
	Bill Robertson	billbob	dukeboys	Admin ●Unrestricted Restricted
	Harry Simpson	bart	homer	Admin Unrestricted ●Restricted

Update Users   Add an Employee   Finished-Continue

FIG. 15C

LOCAL AFTERMARKET SUPPLIER SELECTION

Select vendors with which you wish to do business from the list of local aftermarket suppliers found below. Your selection of suppliers will determine available manufacturer/lines. If you have an existing account with any of the vendors listed, please input your Customer ID Number(s) for each applicable account.

Vendor Type			Vendor Name	Address	Email	Telephone	Existing Customer ID Number	Vendor Login ID	Login Password	Password
Primary	Secondary	Alternate								
		●	Advanced Auto Parts	32 Broad Street Sacramento, CA	xxx@sdsd.com	(xxx) xxx-xxx				
●			Big A Auto Parts	1244 Winston Ct Sacramento, CA	xxx@sdsd.com	(xxx) xxx-xxx				
		●	Danzig Auto	123 East Smith Rancho Cordova, CA	xxx@sdsd.com	(xxx) xxx-xxx				
		●	Federated Auto	1344 Florin Rd Elk Grove, CA	xxx@sdsd.com	(xxx) xxx-xxx	1293384			
	●		NAPA	1802 Versant Ave Rancho Cordova, CA	xxx@sdsd.com	(xxx) xxx-xxx				
		●	NorCal Auto Parts/Carquest	344 Elk Grove Florin Rd Elk Grove CA	xxx@sdsd.com	(xxx) xxx-xxx				
		●	Octagon Distributors	8 Bralo Sacramento, CA	xxx@sdsd.com	(xxx) xxx-xxx				
	●		Parts Warehouse	14th Street Elk Grove, CA	xxx@sdsd.com	(xxx) xxx-xxx				
			Platte River Auto	244 Winston Ct Sacramento, CA	xxx@sdsd.com	(xxx) xxx-xxx				
	●		Valley	32 loop Drive South Sacramento, CA	xxx@sdsd.com	(xxx) xxx-xxx	3392943			

Continue

FIG. 15D

MANUFACTURER /LINE SUMMARY
Primary & Secondary Local Aftermarket vendors

Manufacturer /Line	Big A Auto Parts Primary	NAPA Sacramento Secondary	Parts Warehouse Secondary	Valley Secondary	None Selected
A-1 Cardonne		X			
ABCO				X	
AC Delco	X				
Beck Amley	X		X		
Bendix		X			
Borg Warner		X			
Bosch	X			X	
Bravo		X			
Champion			X		
ConiSeal	X				
Everco	X				
Fel-Pro		X	X		
FRAM	X	X	X	X	
Gates		X			
Lee-Gibson	X		X		

Add A Manufacturer Line   Continue

FIG. 15E

MANUFACTURER /LINE SUMMARY
Alternate Local Aftermarket Vendors

Manufacturer /Line	Advanced Auto Parts	Danzig	Federated	NorCal Auto Parts CarQuest	Octagon Distributors
A-1 Cardonne					X
ABCO		X	X		
AC Delco	X		X	X	X
Beck Arnley	X	X		X	
Bendix		X			X
Borg Warner		X	X		
Bosch	X	X		X	
Bravo		X	X		
Champion		X			X
Coni Seal	X	X			
Everco	X			X	X
Fel-Pro	X	X	X		
FRAM		X		X	
Gates		X			X
Lee-Gibson	X	X			

Add A Manufacturer Line   Continue

FIG. 15F

"WILL SHIP" AFTERMARKET VENDOR SELECTION

Select vendors with which you wish to do business from the list of "Will Ship" aftermarket suppliers found below. Your selection of suppliers will determine your selection of manufacturer/lines.

Vendor Select			Vendor Name	Address	Email Address/ Telephone	Existing Customer ID Number	Vendor Login ID	Vendor Password	Password
Primary	Secondary	Alternate							
		●	American High Performance Parts	3994 American Eagle Blvd. #845-A Los Angeles, CA 89007	AHPP@LAnet.com 302-993-9943				
	●		Bertram Distributing	19923 Eastern Parkway North Seattle, WA 59964	Bertram@RainForest.com 903-887-3422				
●			Parts Xpress	56 West 57th St Phoenix, AZ 77898	APX@AutoPartsExpress.com 887-342-2334	PXP93884			
		●	Robertson Automotive Distributors	923 North Industrial Blvd Williams, CA 95964	Robertson@InternetS.com 916-875-3221				
		●	Xpress Auto Distributors	2311 Branon Pkwy Salt Lake City, UT 59564	Xpress@SaltLakeCity.com 906-753-2121				

Continue

FIG. 15G

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MANUFACTURER /LINE SUMMARY
Primary & Secondary "Will Ship" Aftermarket Vendors

Manufacturer /Line	Parts Xpress Primary	Bertram Distributing Secondary	Xpress Auto Distributors Secondary	None Selected	None Selected
A-1 Cardonne			X		
ABCO		X			
AC Delco	X				
Beck Amley	X	X			
Bendix			X		
Borg Warner		X			
Bosch	X	X			
Bravo			X		
Champion		X			
ConiSeal	X				
Everco	X				
Fel-Pro	X	X			
FRAM		X	X		
Gates		X			
Lee-Gibson	X		X		

Add A Manufacturer Line　　　　　　　　　　Continue

FIG. 15H

MANUFACTURER /LINE SUMMARY
Alternate "Will Ship" Aftermarket Vendors

Manufacturer /Line	American High Performance Parts	Robertson Automotive Distributors	None Selected	None Selected	None Selected
A-1 Cardonne					
ABCO		X			
AC Delco	X				
Beck Arnley	X	X			
Bendix		X			
Borg Warner		X			
Bosch	X	X			
Bravo		X			
Champion		X			
ConiSeal	X	X			
Everco	X				
Fel-Pro	X	X			
FRAM		X			
Gates		X			
Lee-Gibson	X	X			

Add A Manufacturer Line   Continue

FIG. 15I

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SUMMARY OF SELECTED VENDORS

Below are the vendors you have chosen to utilize with RapidAutoNet. If you would like to submit a credit application for any of the vendors, please click on the "Credit App" link provided for each vendor. If you would like to set the order in which your Stock Check Results are displayed, please use the "Display Priority" Column. You may number each Vendor Group from one to five.

Vendor Type	Display Priority	Account # / Status	Vendor Name	Address	City	State	Email	Telephone
PRIMARY LOCAL	[v]	Credit Application	Big A Auto Parts	1244 Winston Ct	Sacramento	CA	xxx@sdsd.com	(xxx) xxx-xxx
SECONDARY LOCAL	[v]	Credit Application	NAPA	1802 Versant Ave	Rancho Cordova	CA	xxx@sdsd.com	(xxx) xxx-xxx
	[v]	Credit Application	Parts Warehouse	14th Street	Elk Grove	CA	xxx@sdsd.com	(xxx) xxx-xxx
	[v]	3392943	Valley	32 Loop Drive South	Sacramento	CA	xxx@sdsd.com	(xxx) xxx-xxx
ALTERNATE LOCAL	[v]	Credit Application	Advanced Auto Parts	32 Broad Street	Sacramento	CA	xxx@sdsd.com	(xxx) xxx-xxx
	[v]	Credit Application	Danzig Auto	123 East Smith	Rancho Cordova	CA	xxx@sdsd.com	(xxx) xxx-xxx
	[v]	1293384	Federated Auto	1344 Florin Rd	Elk Grove	CA	xxx@sdsd.com	(xxx) xxx-xxx
	[v]	Credit Application	NorCal Auto Parts/ Carquest	344 Elk Grove /Florin Rd	Elk Grove	CA	xxx@sdsd.com	(xxx) xxx-xxx
	[v]	Credit Application	Octagon Distributors	8 Bralo	Sacramento	CA	xxx@sdsd.com	(xxx) xxx-xxx
PRIMARY WILL-SHIP	[v]	PXP93884	Parts Xpress	56 West 57th St.	Phoenix	AZ	xxx@sdsd.com	(xxx) xxx-xxx
SECONDARY WILL-SHIP	[v]	Credit Application	Bertram Distributing	19923 Eastern Parkway North	Seattle	WA	Bertram@RainForest.com	(908) 998-9238
	[v]	Credit Application	Xpress Auto Distributors	2311 Branon Pkwy.	Salt Lake City	UT	Xpress@SaltLake.com	(906) 756-0098
ALTERNATE WILL-SHIP	[v]	Credit Application	American High Performance Parts	3994 American Eagle Blvd #345-A	Los Angeles	CA	shop@fanet.com	(302) 993-9943
	[v]	Credit Application	Robertson Automotive Distributors	923 North Industrial Blvd.	Williams	CA	robertson@internet5.com	(916) 875-3221

Continue

FIG. 15J

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VENDOR PRICE DISPLAY PREFERENCES

RapidAutoNet™ allows you to customize your Stock Check Results by allowing you to select a "Selling Price Calculation Method" and whether or not to display cost pricing on a per vendor basis. Your selections will determine how Price and Cost information is displayed in your Stock Check Results screens.

SELLING PRICE CALCULATION METHODS:

- Vendor Suggested: Displays the vendor's Suggested Selling Price
- Mark On Cost: Displays the Selling Price as a Markup on the vendors cost. The Markup Percentage is determined by the number you enter.

COST DISPLAY OPTIONS

- Display Cost - YES: Displays the Vendor Cost, for a particular vendor, in the Stock Check Results screens.

- Display Cost - NO: Does Not Display the Vendor Cost, for a particular vendor, in the Stock Check Results screens.

Vendor Type	Vendor Name	Selling Price	Calculation Method	Cost Display	
PRIMARY LOCAL	Big A Auto Parts	● Vendor Suggested Cost %	Markup On	● Yes	No
SECONDARY LOCAL	NAPA	● Vendor Suggested Cost %	Markup On	● Yes	No
	Parts Warehouse	● Vendor Suggested Cost %	Markup On	● Yes	No
	Valley	● Vendor Suggested Cost %	Markup On	● Yes	No
ALTERNATE LOCAL	Advanced Auto Parts	● Vendor Suggested Cost %	Markup On	● Yes	No
	Danzig Auto	● Vendor Suggested Cost %	Markup On	● Yes	No
	Federated Auto	● Vendor Suggested Cost %	Markup On	● Yes	No
	NorCal Auto Parts CarQuest	● Vendor Suggested Cost %	Markup On	● Yes	No
	Octagon Distributors	● Vendor Suggested Cost %	Markup On	● Yes	No
PRIMARY WILL-SHIP	Parts Xpress	● Vendor Suggested Cost %	Markup On	● Yes	No
SECONDARY WILL-SHIP	Bertram Distributing	● Vendor Suggested Cost %	Markup On	● Yes	No
	Xpress Auto Distributors	● Vendor Suggested Cost %	Markup On	● Yes	No
ALTERNATE WILL-SHIP	American High Performance Parts	● Vendor Suggested Cost %	Markup On	● Yes	No
	Robertson Automotive Distributors	● Vendor Suggested Cost %	Markup On	● Yes	No

FIG. 15K

VENDOR DEFAULT DISPLAY PREFERENCE
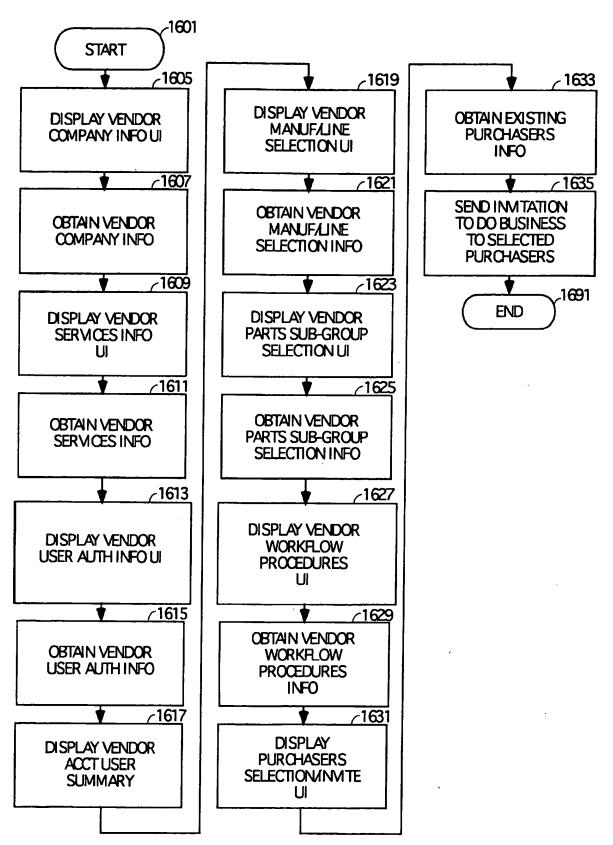
Please select your default "Stock Check Results Screen" display preference. This is only your "default" view. You may change the view at any time from the "Stock Check Results Screens".

- Display Primary & Secondary Vendors Together

Display Primary Vendor(s) Alone

Continue

FIG. 15L

FIG. 16

RAN VENDOR COMPANY INFORMATION   *i*NFO

Company

Contact Name

Address

City

State

Zip

Your Metropolitan
Area   - Select A Metropolitan Area -   ▼

Telephone

Fax Number

Email

Business Hours
Monday thru Friday   Open 8:00am Close 5:00pm

Business Hours
Saturday   Open 8:00am Close 5:00pm

Holiday Hours   New Years Day   Open Closed Close
                      Closed

                      Lincoln's B-Day   Open Closed Close
                      Closed

                      Lincoln's B-Day   Open Closed Close
                      Closed

                      July 4th   Open Closed Close
                      Closed

                      Memorial Day   Open Closed Close
                      Closed

                      Veterans Day   Open Closed Close
                      Closed

                      Thanksgiving Day Open Closed Close
                      Closed

                      Christmas Day   Open Closed Close
                      Closed

                                         Open   Close

                                         Open   Close

                                         Open   Close

FIG. 17A(1)

Open   Close

Supplier Type
Please check those   Retailer
categories that best   WD
identify your type of   Jobber
business   New Car Dealer

**Franchise
Affiliation**
Select your affiliation.   NAPA   [▲]
                               Bumper to Bumper
                               Federated
                               IWDA   [▼]

If Not On Our List, Please <u>Add Your Franchiser</u>

**Corporate
Ownership**
Select your affiliation.   None   [▼] Branch ID

If Not On Our List, Please <u>Add The Name Of The
Corporation That Owns Your Location</u>

**Select Your Point
Of Sale
Business System**   Select One   [▼]

                                                            [▲]

Comments
Enter some descriptive
information about your
company. What you input
here will be displayed to
potential parts   [▼]
purchasers.   [◄]   [►]

Continue

FIG. 17A(2)

RAN VENDOR SERVICES INFORMATION   *i*NFO

Delivery
*Select the delivery
services you offer*

Hot Shot *(unscheduled)*
Scheduled *(periodic at set times)*
Will Ship   *(to purchasers outside delivery area)*

**"Whip Ship"
Shipping Options**
*Enter descriptions of the
various shipping options
provided to purchasers*

Option #1:
  UPS Standard Ground
Option #2:
  UPS 3-Day Ground
Option #3:
  UPS 2-Day Ground
Option #4:
  UPS Overnight
Option #5:
  UPS Overnight Saturday
Option #6:
  DHL International
Option #7:

Option #8:

Part Hold
*Will permit Shops to
place part on hold*

WILL HOLD PART(S) FOR   0   hour(s)

**Terms &
Conditions**
*Cut and Paste your
company's terms and
conditions*

▲

◄   ▼
                                   ►

Continue

FIG. 17B

VENDOR USER AUTHENTICATION *i*NFO

You will need to create a basic User Account for general access to RAN, as well as an Administrative User Account. The Administrative Account allows you to change your operating parameters within RAN.

User Name

Password

Re-Enter Password

Permission Level   Un-Restricted

You will need to enter an Administrative Username and Password that will give you authority to change your account profile settings. Please enter them below.

Admin User Name

Admin Password

Re Enter Password

Permission Level   Administrative
        Add Additional User(s)   Finished Adding Users

FIG. 17C

Account User Summary

Delete	Employee Name	User Name	Password	Telephone #	Email Address	Permission Level		
	John Wilson	jwil	zigbah	916-223-4983	jwilson@jps.net	● Admin	Unrestricted	Restricted
	Fred Jones	freddy	xanadu	916-698-0094	fjones@VirtualSacramento.com	Admin	● Unrestricted	Restricted
	Greg Roberts	gman	greg1956	530-993-4983	Roberts@Foothill.com	Admin	● Unrestricted	Restricted
	Bill Robertson	billbob	rob3993	916-992-3984	billybob@Dynamic.net	Admin	● Unrestricted	Restricted
	Harry Simpson	bart	smartbart	916-499-4993	Bart@Simpson.com	Admin	Unrestricted	● Restricted

Update Users   Add an Employee   Finished-Continue

FIG. 17D

VENDOR MANUFACTURER / LINE SELETION *i*NFO

From the list below, please select the Manufacturer / Line(s) for which you need
a
Preferred Local Aftermarket Vendor

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A	Select
A1 Cardone Canada	☐
A1 Clutch	☐
A1 Cardone Industries	☐
ACME Radiator	☐
A1 Cardone LD Calipers	☐
A1 Cardone Vacuum Pump	☐
A1 Cardone Clutch Co.	☐
APS/Big A	☐
ABSCO LT'EE LTD	☐
ABSCO Canada	☐
AC Delco	☑
AC Delco (Remy)	☑
AC Delco Canada	☐
AC Delco Durapower Battery	☑
AC Delco Freedom Battery	☑
AC Delco Remy Canada	☐
AC Delco / Durastop Brakes	☑
AC Delco / Durastop Canada	☐
AC Products	☐
Accel	☑
Accurate Parts Division	☐
ACI	☐
ACI Wind Washer Pump - Box	☐
AE Clevite	☐
AE Quick Boot	☐
Aimco Canada	☐

FIG. 17E

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VENDOR PARTS SUB-GROUP SELECTION

From the list below, please select the Parts Sub-Group(s) for which you would
like to provide Stock Checks and Availability information to Purchasers.

iNFO

Manufacturer / Line	Parts Sub-Group	Line Code	Manufacturer / Line	Parts Sub-Group	Line Code
AC Delco	Filters / PCV Valves	[ ]	AC Delco (Remy)	Ignition Parts	[ ]
	Bulbs Currently Unavailable In Out	[ ]		Switches / Relays Pigtails / Sockets	[ ]
	Ignition Parts	[ ]		Fans / Fan Clutches / Parts	[ ]
	Switches / Relays / Pigtails / Sockets	[ ]		Charging System	[ ]
	Ignition Wires	[ ]		Starting System	[ ]
	Thermostats / Housing	[ ]		Charging System Parts	[ ]
	Fans / Fan Clutches / Parts	[ ]		Starting System Parts	[ ]
	Radiators / Caps	[ ]		ABS Parts / Brake Cables / Switches	[ ]
	Batteries / Cables	[ ]		Choke Parts / solenoids / Valves	[ ]
	Charging System Parts	[ ]		emission Parts	[ ]
	Front Disc Brakes	[ ]		Diesel Injection Parts	[ ]
	Front Disc Hardware	[ ]		Blower Motors / Duct Hose	[ ]
	Front Drum Brakes	[ ]		AC Filters / Valves / Kits / Parts	[ ]
	Rear Disc Brakes	[ ]		Heat / AC Relays / Switches	[ ]
	Rear Disc Hardware	[ ]		clutches / Parts	[ ]
	Rear Drum Brakes	[ ]		Wiper Blades / Refills / Arms / Pumps	[ ]
	Rear Drum Hardware	[ ]		Electric Motors	[ ]
	Master Cylinders / Kits / Boosters	[ ]		Misc Relays / Switches	[ ]
	ABS Parts / Brake Cables / Switches	[ ]		Interior Accessories	[ ]
	Fuel Pumps / Parts	[ ]	AC Delco Durapower Battery	Batteries / Cables	[ ]
	Carburetors / Kits	[ ]			
	Carburetors Parts	[ ]			

FIG. 17F

SUBSTITUTE SHEET (RULE 26)

VENDOR WORKFLOW PROCEDURES

Select the method by which RAN will handle your
Stock Check and Order Transactions

*i*NFO

Transaction Review & Approval

STOCK CHECKS   –Select One–   ▼

ORDERS   –Select One–   ▼

COD Customer Account

*This is the Account ID, Login
Name and Login Password
RapidAutoNet utilizes to display
price level information to the COD
Customer from your Business
System. By providing this
information, you will be granting
Purchasers, that do not currently
have an account with your
company, access to your inventory
and COD Customer Pricing
information.*

*If you choose NOT to provide this
information, you will not be able to
transact with Purchasers that DO
NOT have an existing account with
your business.*

                              Account ID

                              Login Name

                          Login Password

                    Login Password (again)

Price Display Options

*Select the Pricing Display Option
you wish to provide Purchasers as
a default.*

        Initially Display Both Pricing & Stock Information   ▼

                              Finish

FIG. 17G

Setup RAN Purchasers In Your Area
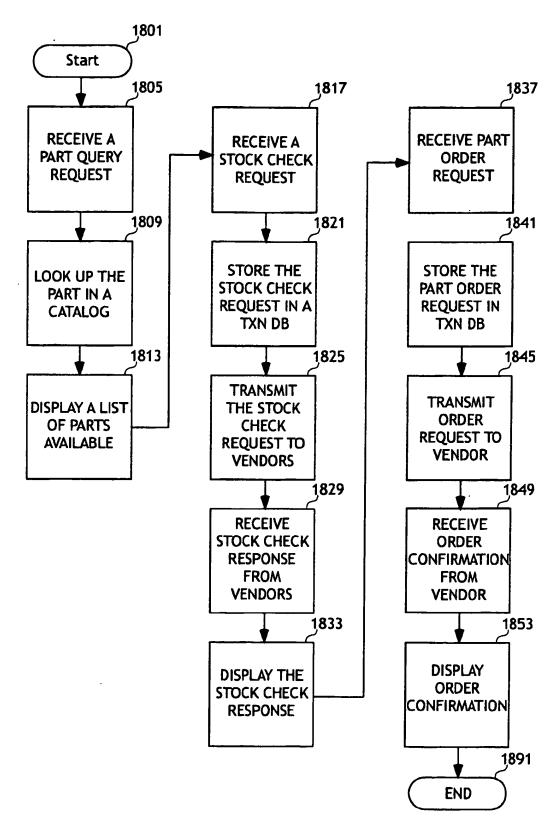
Below is a list of existing RAN purchasers that can be found in your general geographic location. If any of these purchasers already have accounts with your business, please enter their account number(s) in the space(s) provided. To invite a purchaser to become a NEW customer, click on the "Invite" link and follow the on-screen instructions.

Customer Name	Address	Telephone	Customer Number	Login Name	Password	Password Again	Invitation
Al's Repair Shop	2993 E. Industrial Blvd. #304E Sacramento, CA 95684	916 683-1839					Invite
Bill's Repair Shop	948 Easy Street Roseville, CA 95664	916 683-1839					Invite
Cliff's Repair	99384 Avenue of Commerce South Sacramento, CA 95843	916 683-1839					Invite
George's Auto Haven	xxxx	916 683-1839					Invite
Henry's Fixit Shop	xxxx	916 683-1839					Invite
Lou's Car Repair	xxxx	916 683-1839					Invite
Marvin's Electronic Diagnostics	xxxx	916 683-1839					Invite
Phil's Ford Repair	xxxx	916 683-1839					Invite
Tomorrowland Car Repair	xxxx	916 683-1839					Invite
Wally's	xxxx	916 683-1839					Invite

Finish   Invite All New Purchasers

FIG. 17H

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FIG. 18

FIG. 19

1901 — START

1905 — DISPLAY NEW ORDER FIRST UI
SHOWING A LIST OF VEHICLE
YEARS AND A BOX FOR USER TO
ENTER A PART NUMBER

1909 — QUERY BY VEHICLE/ PART INFO?

1913 — PERFORM QUERY BY PART NUMBER/MANUF LINE CODE — NO

YES

1917 — IN RESPONSE TO USER'S SELECTION
OF A SPECIFIC YEAR BEING
DISPLAYED, DISPLAY A LIST OF
VEHICLE MAKES BASED ON THE
YEAR SELECTED

1921 — IN RESPONSE TO USER'S SELECTION
OF A SPECIFIC MAKE BEING
DISPLAYED, DISPLAY A LIST OF
VEHICLE MODELS BASED ON
MAKE SELECTED

1925 — IN RESPONSE TO USER'S SELECTION
OF A SPECIFIC MODEL BEING
DISPLAYED, DISPLAY A LIST OF
VEHICLE ENGINE TYPES BASED
ON THE VEHICLE MODEL SELECTED

1929 — IN RESPONSE TO USER'S SELECTION
OF A SPECIFIC ENGINE TYPE BEING
DISPLAYED, DISPLAY A LIST OF PART
GROUPS BASED ON THE ENGINE
TYPE SELECTED

1933 — IN RESPONSE TO USER'S SELECTION
OF A SPECIFIC PARTS GROUP BEING
DISPLAYED, DISPLAY A LIST
OF PARTS SUBGROUPS BASED
ON THE PARTS GROUP SELECTED

1937 — IN RESPONSE TO USER'S SELECTION
OF A SPECIFIC PARTS SUBGROUP BEING
DISPLAYED, RETRIEVE CORRESPONDING
PART ENTRIES FROM THE CATALOG

1941 — # OF ENTRIES RETRIEVED> N?

1945 — DISPLAY PART ENTRIES RECEIVED — NO

YES

1949 — PROCESS SUBGROUP DATASET
AND DISPLAY A MULTI-
SELECTABLE GROUP OF
UNIQUE PART DESCRIPTIONS

1953 — IN RESPONSE TO USER'S
SELECTION OF PART
DESCRIPTION(S), DISPLAY
PART ENTRIES CORRESPONDING
TO THE PART DESCRIPTION(S)
SELECTED

1991 — START

FIG. 20

RapidAutoNet Microsoft Internet Explorer

File   Edit   Favorites   Help

Back   Forward   Stop   Refresh   Home   Search   Favorites   History   Channels   Fullscreen   Mail   Print   Edit

Links

Address   [e] C:\My Documents\Clients\004080-RapidNet\RAN2\new mockup\main\trimmainpg.htm

RapidAutoNet   STATUS   NEW ORDER   DELIVERY   REPORTS   SETUP   LOG OUT   SUPPORT

1 Year   2 Make   3 Model   4 Engine

1982 1983
1984 1985
1986 1987
1988 1989
1990 1991
1992 1993
1994 1995
1996 1997

Enter Part Number Information (right)   Part Number   141603   Continue   info
or select vehicle attributes (above).

[e] Done   [e] Internet Zone

FIG. 21A

RapidAutoNet Microsoft Internet Explorer

File   Edit   Favorites   Help

Back   Forward   Stop   Refresh   Home   Search   Favorites   History   Channels   Fullscreen   Mail   Print   Edit

Links

Address C:\My Documents\Clients\004080-RapidNet\RAN2\new mockup\main\fm\mainpg.htm

STATUS

DELIVERY   REPORTS   SETUP   LOG OUT   SUPPORT

1 Year   2 Make   3 Model   4 Engine

1982 1983   Selected: 1990
1984 1985   Acura   Car-Truck
1986 1987   AMC-Eagle   Car-Truck
1988 1989   Chevrolet   Car-Truck
1990 1991   Daihatsu   Car-Truck
1992 1993   Dodge   Car-Truck
1994 1995   Infinity   Car-
1996 1997   Isuzu   Car-Truck
                Mitsubishi   Car-Truck
                Porsche   Car-
                Saab   Car-
                Nissan-Datsun Car-Truck
                Saturn   Car-
                Audi   Car-
                Jaguar   Car-
                Subaru   Car-Truck
                BMW   Car-
                Ford   Car-Truck
                Land Rover   Car-Truck
                Oldsmobile   Car-Truck
                Suzuki   Car-Truck
                Buick   Car-Truck

Enter Part Number Information (right)
or select vehicle attributes (above).   Part Number 141603   Continue Info

Done   Internet Zone

FIG. 21B

RapidAutoNet Microsoft Internet Explorer

File Edit Favorites Help

Back Forward Stop Refresh Home Search Favorites History Channels Fullscreen Mail Print Edit Links

Address C:\My Documents\Clients\004080-RapidNet\RAN2\new mockup\main\0\mmainpg.htm

STATUS [...] DELIVERY REPORTS SETUP LOG OUT SUPPORT

1 Year

1982	1983
1984	1985
1986	1987
1988	1989
1990	1991
1992	1993
1994	1995
1996	1997

2 Make

Selected: 1990

Acura	Car-Truck
AMC-Eagle	Car-Truck
Chevrolet	☑ Truck
Daihatsu	Car-Truck
Dodge	Car-Truck
Infinity	Car-
Isuzu	Car-Truck
Mitsubishi	Car-Truck
Porsche	Car-
Saab	Car-
Nissan-Datsun	Car-Truck
Saturn	Car-
Audi	Car-
Jaguar	Car-
Subaru	Car-Truck
BMW	Car-
Ford	Car-Truck
Land Rover	Car-Truck
Oldsmobile	Car-Truck
Suzuki	Car-Truck
Buick	Car-Truck

3 Model

Selected: 1990 Chevrolet

Camaro
Caprice RWD
Caprice Wagon RWD
Cavilier/Z24
Corsica
Corvette
Lumina

4 Engine

Enter Part Number Information (right)
or select vehicle attributes (above).

Part Number [141603] [Continue] info

Done   Internet Zone

FIG. 21C

FIG. 21D

Parts Group

Select A Part Group From The List Below:

1990 Chevrolet Camaro V8-305 5.0L VIN F

- **Tune-Up/Filters**
- **<u>Belts/Cooling</u>**
- **Electrical**
- **<u>Brakes</u>**
- **Fuel/Emission**
- **Heating/AC**
- **Engine**
- **Drive Train**
- **Suspension / Steering**
- **Exhaust**
- **Miscellaneous**

FIG. 21E

Parts Subgroup

Select A Part Group From The List Below:

1990 Chevrolet Camaro V8-305 5.0L VIN F

- **Tune-Up/Filters**
- <u>**Belts/Cooling**</u>
  - <u>Belts</u>
  - Hoses
  - Thermostats / Housing
  - <u>Water Pumps</u>
  - <u>Fans/Fan Clutches/Parts</u>
  - Radiator/Caps
  - Oil Cooler/Parts

- **Electrical**
- <u>**Brakes**</u>
- **Fuel/Emission**
- **Heating/AC**
- **Engine**
- **Drivetrain**
- **Suspension/Steering**
- **Exhaust**
- **Miscellaneous**

FIG. 21F

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Parts Descriptions

Select A Part Group From The List Below:

1990 Chevrolet Camaro V8-305 5.0L VIN F

- **Tune-Up/Filters**
- **Belts/Cooling**
    - Belts
    - Hoses
    - Thermostats / Housing
    - Water Pumps
        - ✓ SELECT ALL
            Water Pumps - New
            Water Pumps - Reman

        Find Selected Parts

    - Fans/Fan Clutches/Parts
    - Radiator/Caps
    - Oil Cooler/Parts

- **Electrical**
- **Brakes**
- **Fuel/Emission**
- **Heating/AC**
- **Engine**
- **Drivetrain**
- **Suspension/Steering**
- **Exhaust**
- **Miscellaneous**

FIG. 21G

PARTS CATALOG SEARCH RESULTS

*i*NFO

| Primary Local Vendors ▼ | ~2103 |

~2105

| Change Parts View | | Sorts By Part Description | ~2107 |

Aftermarket Water Pumps	Part #	Part Description	Qty Req Per Veh	List Price	Qty Required	Select Part	Parts Warehouse Primary	Valley	Federated
Arrow Remanufacturing (ARM) - Product Line Available From ⟹							■ ~2113		■
⟹	7-1363	Water Pump-Reman	1	$29.90	□ ~2109	□ ~2111			
Perfect Circle (CIR) - Product Line Available From ⟹							■	■	
⟹	228-2064	Water Pump-New	1	$69.40	□	□			
Sealed Power (SPW) - Product Line Available From ⟹									■
⟹	PC-669	Water Pump-New	1	$68.45	□	□			
Perfection Hy-Test (HYT) - Product Line Available From ⟹								■	
⟹	15-1931	Water Pump-New	1	NOF	□	□			
	WP1931	Water Pump-Remain	1	$23.50	□	□			

~2115   ~2117

| Find Another Part | | Check Stock |

Search By
Part Number   Part Number [141603]   [Find Part]

FIG. 21H

PART NUMBER: {Part Number Here}

Enter The RAN Line Code | BDX | | Continue |

- OR If You Do Not Know The RAN Line Code -   *i*NFO

Select A Manufacturer From The Alphabetical List

A B C D E F G H I J K L M N O P Q R S T U V W X
Y Z

FIG. 21I

*i*NFO

MANUFACTURER SELECTION
Select A Manufacturer From The List Below:

- Barkley Mfg

- Bendix

- Berton

- Best Products

- Bidwell

- Binford

- Boettger

- Bosch

- Bowden

- Buckheim

FIG. 21J

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MANUFACTURER LINE SELECTION
For PART NUMBER: 141603 - MANUFACTURER: Bendix

iNFO

Manufacturer / Line	Parts Sub-Group	Line Code
Bendix		
	Filters / PCV Valves	☐
	Ignition Parts	☐
	Switches / Relays / Pigtails / Sockets	☐
	Ignition Wires	☐
	Thermostats / Housings	☐
	Fans / Fan Clutches / Parts	☐
	Radiators / Caps	☐
	Batteries / Cables	☐
	Charging System Parts	☐
	Front Disc Brakes	☐
	Front Disc Hardware	☐
	Front Drum Brakes	☐
	Rear Disc Brakes	☐
	Rear Disc Hardware	☐
	Rear Drum Brakes	☐
	Rear Drum Hardware	☐
	Master Cylinders / Kits / Boosters	☐
	ABS Parts / Brake Cables / Switches	☐
	Fuel Pumps / Parts	☐
	Carburetors / Kits	☐
	Carburetors Parts	☐
	Choke Parts / Solenoids / Valves	☐
	Emission Parts	☐
	Diesel Injection Parts	☐
	Blower Motors / Duct Hose	☐
	AC Compressors / Clutches	☐
	AC Filters / Valves / Kits / Parts	☐
	Heat / AC Relays / Switches	☐
	Heater Cores / AC Hoses / Misc Parts	☐
	Clutches / Parts	☐

FIG. 21K

PARTS CATALOG SEARCH RESULTS

| Primary Local Vendors   ▼ |

| Change Parts View | | Sorts By Part Description |

AFTERMARKET Part # Part Description Qty Req List   Qty   Select Parts   Valley Federated
                                      Per Veh Price   Required Part   Warehouse

Bendix Product Line Available From --->   ■

141603   F Brake Rotor - RPO Code 1LE   1 $123.26   [1]   □

| Find Another Part | | Check Stock |

Search By
Part Number   Part Number [141603]   [Find Part]

FIG. 21L

PARTS CATALOG SEARCH RESULTS

| Primary Local Vendors   ▼ |

| Change Parts View | | Sorts By Part Description |

AFTERMARKET Part # Part Description Qty Req List   Qty   Select Parts   Valley Federated
                                      Per Veh Price   Required. Part   Warehouse

No Match Found In Catalog - Click "Check Stock" To Send Request Directly To A Vendor

| Find Another Part | | Check Stock |

Search By
Part Number   Part Number [141603]   [Continue]

FIG. 21M

VENDOR INQUIRY SELECTION   *i*NFO

Part Number: {Part # Here} - MFG / LINE: {Bendix}

Vendor Preference | Primary Local Aftermarket ▼ | | Change Vendors |
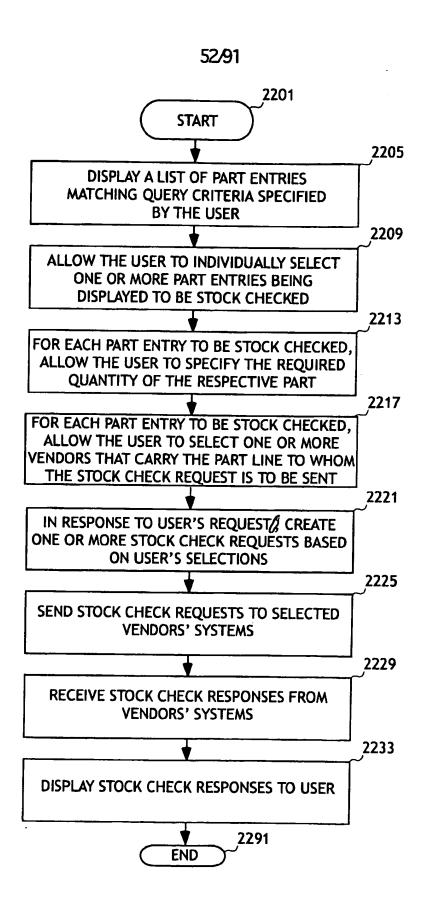
PRIMARY LOCAL AFTERMARKET VENDORS

◉ Parts Warehouse
○ Valley
○ Federated

| Continue |

FIG. 21N

```
            ┌─────────────┐  2201
            │    START    │─╱
            └──────┬──────┘
                   │
                   ▼
    ┌────────────────────────────────┐  2205
    │  DISPLAY A LIST OF PART ENTRIES │─╱
    │ MATCHING QUERY CRITERIA SPECIFIED│
    │         BY THE USER             │
    └────────────────┬───────────────┘
                     │
                     ▼
    ┌────────────────────────────────┐  2209
    │  ALLOW THE USER TO INDIVIDUALLY │─╱
    │  SELECT ONE OR MORE PART ENTRIES│
    │   BEING DISPLAYED TO BE STOCK   │
    │           CHECKED               │
    └────────────────┬───────────────┘
                     │
                     ▼
    ┌────────────────────────────────┐  2213
    │ FOR EACH PART ENTRY TO BE STOCK │─╱
    │ CHECKED, ALLOW THE USER TO      │
    │ SPECIFY THE REQUIRED QUANTITY   │
    │ OF THE RESPECTIVE PART          │
    └────────────────┬───────────────┘
                     │
                     ▼
    ┌────────────────────────────────┐  2217
    │ FOR EACH PART ENTRY TO BE STOCK │─╱
    │ CHECKED, ALLOW THE USER TO      │
    │ SELECT ONE OR MORE VENDORS THAT │
    │ CARRY THE PART LINE TO WHOM THE │
    │ STOCK CHECK REQUEST IS TO BE SENT│
    └────────────────┬───────────────┘
                     │
                     ▼
    ┌────────────────────────────────┐  2221
    │ IN RESPONSE TO USER'S REQUEST,  │─╱
    │ CREATE ONE OR MORE STOCK CHECK  │
    │ REQUESTS BASED ON USER'S        │
    │ SELECTIONS                      │
    └────────────────┬───────────────┘
                     │
                     ▼
    ┌────────────────────────────────┐  2225
    │ SEND STOCK CHECK REQUESTS TO    │─╱
    │ SELECTED VENDORS' SYSTEMS       │
    └────────────────┬───────────────┘
                     │
                     ▼
    ┌────────────────────────────────┐  2229
    │ RECEIVE STOCK CHECK RESPONSES   │─╱
    │ FROM VENDORS' SYSTEMS           │
    └────────────────┬───────────────┘
                     │
                     ▼
    ┌────────────────────────────────┐  2233
    │ DISPLAY STOCK CHECK RESPONSES   │─╱
    │ TO USER                         │
    └────────────────┬───────────────┘
                     │
                     ▼
            ┌─────────────┐  2291
            │     END     │─╱
            └─────────────┘
```

FIG. 22

STOCK CHECK RESULTS BY MANUFACTURER

Primary Local Vendors ▼	2301	2307

Re-Submit Stock Check Request ▼	Sort By Part Description

AFTERMARKET WATER PUMPS	Part #	Part Description	Parts Warehouse Primary		Valley		Federated	
			Cost	On Hand	Cost	On Hand	Cost	On Hand
Arrow Remanufacturing [ARW]	7-1363	Water Pump-Reman	View Pricing	4			☐ N/A Sell $31.95	3
Perfect Circle [PER]	228-2064	Water Pump New	View Pricing	3	☐ $31.95 Sell: $41.95 Core $5.95	1 (2311)		
Sealed Power [SPW]	PC- 669	Water Pump New					☐ N/A Sell $32.75	1
Perfect Hy-Test [PHT]	15-1931	Water Pump New			☐ $29.25 Sell: $39.25 Core $4.95			
	WP1931	Water Pump-Reman			☐ $27.25 Sell: $37.25 Core $4.95			

PARTS ALREADY ON THE ORDER APPEAR BELOW

Aftermarket Belts	Part #	Part Description	Parts Warehouse		Valley		Federated	
			Cost	On Hand	Cost	On Hand	Cost	On Hand
Gates [GAT]	K060945	Serpentine Belt - Green Stripe	☑ $21.95 Sell: $32.93	3				

Add Another Part To The Stock Check Request	2321

Add To Order	2331

Search By Part Number   Part Number [141603] [Find Part]

FIG. 23

54/91

STOCK CHECK
PROCESSING — 2401

2403 — MARKET SERVER RECEIVES A STOCK CHECK REQUEST FROM THE USER

DB CONVERTER SCANS TXN DB FOR NEW STOCK CHECK REQUEST

VENDOR SYSTEM INTERFACE (VSI) SCANS MESSAGE DB FOR NEW STOCK CHECK REQUEST (SELECT ORDER ROWS AND REQUESTITEM ROWS WITH MSG TYPE = STKREQ) — 2461

2405 — MARKET SERVER UPDATES TXN DB WITH A NEW STOCK CHECK REQUEST

2431 — NEW STOCK CHECK REQUEST FOUND? — NO / YES — 2433

NEW STOCK CHECK REQUEST FOUND? — 2463 — NO / YES

MARKET SERVER WAITS FOR STOCK CHECK RESPONSE

DB CONVERTER CREATES A NEW ORDER ENTRY IN MESSAGE DB, SET MSG TYPE TO STKREQ, CREATES A REQUESTITEM ENTRY FOR EACH PART ITEM TO BE STOCK CHECKED, SETS MSGTYPE TO STKREQ — 2435

VSI SUBMITS NEW STOCK CHECK REQUEST TO VENDOR SYSTEM — 2465

2407 — STOCK CHECK RESPONSE IN TXN DB? — NO / YES

2409

VSI RECEIVES STOCK CHECK RESPONSE INFO FROM VENDOR SYSTEM — 2467

MARKET SERVER RETRIEVES STOCK CHECK RESPONSE FROM TXN DB AND DISPLAYS TO USER

DB CONVERTER SCANS MESSAGE DB FOR STOCK CHECK RESPONSE (SELECT ENTRIES WITH MSG TYPE = STKRESP) — 2439

VSI CREATES A STOCK CHECK RESPONSE ENTRY IN MESSAGE DB, SETS MSG TYPE OF CORRESPONDING ORDER AND REQUESTITEM ENTRIES TO STKRESP — 2469

2411

STOCK CHECK RESPONSE FOUND IN MESSAGE DB? — 2441 — NO / YES

DB CONVERTER UPDATES TXN DB WITH STOCK CHECK RESPONSE INFO, SET MSG TYPE OF THE CORRESPONDING ORDER ENTRY AND REQUEST ITEMS ENTRIES TO STKUPDT — 2443

FIG. 24

START ⟨2501⟩

DISPLAY THE STOCK CHECK RESULTS
RECEIVED FROM VENDORS ⟨2505⟩

ALLOW THE USER TO
INDIVIDUALLY SELECT ONE OR
MORE PART ENTRIES BEING
DISPLAYED TO BE ORDERED ⟨2509⟩

FOR EACH PART ENTRY TO BE ORDERED,
ALLOW THE USER TO SELECT ONE OR MORE
VENDORS TO WHOM ORDER PLACEMENT
REQUEST IS TO BE SENT ⟨2513⟩

IN RESPONSE TO USER'S REQUEST, CREATE
ONE OR MORE ORDER PLACEMENT REQUESTS
BASED ON USER'S SELECTIONS ⟨2517⟩

SEND ORDER PLACEMENT REQUESTS TO
SELECTED VENDORS' SYSTEMS ⟨2521⟩

RECEIVE ORDER CONFIRMATIONS FROM
VENDORS' SYSTEMS ⟨2525⟩

DISPLAY ORDER CONFIRMATIONS
TO USER ⟨2529⟩

END ⟨2591⟩

FIG. 25

FIG. 26

```
                    ┌──────────────┐ 2701
                    │    ORDER     │
                    │  PROCESSING  │
                    └──────┬───────┘
                           │
┌─────────────────────┐    ▼                    ┌─────────────────────┐
│ DISPLAY SUMMARY OF  │2711   ╱◇╲  2751          │ DISPLAY A SUMMARY OF│
│ OPEN JOBS STATUS    │◄─────╱OPEN╲──────────────│ COMPLETED JOBS STATUS│
│                     │ OPEN ◇JOBS OR◇ COMPL     │                     │
└──────────┬──────────┘     ╲COMPLETED╱          └──────────┬──────────┘
           │                 ╲JOBS?╱                        │
           ▼                   ╲◇╱                          ▼
┌─────────────────────┐                          ┌─────────────────────┐
│ IN RESPONSE TO      │                          │ IN RESPONSE TO USER'S│
│ USER'S SELECTION OF │2713                 2753 │ SELECTION OF A VENDOR│
│ A VENDOR BEING      │                          │ BEING DISPLAYED,     │
│ DISPLAYED, DISPLAY  │                          │ DISPLAY THE SELECTED │
│ THE SELECTED        │                          │ VENDOR'S INFORMATION │
│ VENDOR'S INFORMATION│                          │                     │
└──────────┬──────────┘                          └──────────┬──────────┘
           ▼                                                 ▼
┌─────────────────────┐                          ┌─────────────────────┐
│ IN RESPONSE TO      │                          │ IN RESPONSE TO USER'S│
│ USER'S SELECTION OF │2715                 2755 │ SELECTION OF AN ADD  │
│ AN ORDER NUMBER     │                          │ PART FUNCTION,       │
│ BEING DISPLAYED,    │                          │ DISPLAY THE PARTS    │
│ DISPLAY THE ORDER   │                          │ GROUP MENU FOR THAT  │
│ STATUS HISTORY      │                          │ PARTICULAR JOB       │
└──────────┬──────────┘                          └──────────┬──────────┘
           ▼                                                 ▼
┌─────────────────────┐                          ┌─────────────────────┐
│ IN RESPONSE TO      │                          │ IN RESPONSE TO USER'S│
│ USER'S SELECTION TO │2717            2757       │ SELECTION OF A       │
│ CANCEL A JOB BEING  │                          │ RE-OPEN FUNCTION,    │
│ DISPLAYED, PERFORM  │                          │ DISPLAY THE PARTS    │
│ A JOB CANCEL        │                          │ GROUP MENU FOR THAT  │
│ FUNCTION            │                          │ PARTICULAR JOB       │
└──────────┬──────────┘                          └──────────┬──────────┘
           ▼                                                 │
┌─────────────────────┐                                      │
│ IN RESPONSE TO      │                                      │
│ USER'S SELECTION TO │2719                                  │
│ CANCEL AN ORDER     │                                      │
│ BEING DISPLAYED,    │                                      │
│ PERFORM AN ORDER    │                                      │
│ CANCEL FUNCTION     │                                      │
└──────────┬──────────┘                                      │
           ▼                                                 │
┌─────────────────────┐                                      │
│ IN RESPONSE TO      │                                      │
│ USER'S SELECTION OF │2721                                  │
│ CATALOG STATUS BEING│                                      │
│ DISPLAYED, DISPLAY  │                                      │
│ THE CATALOG PART    │                                      │
│ SEARCH RESULTS FOR  │                                      │
│ THAT PARTICULAR JOB │                                      │
└──────────┬──────────┘                                      │
           ▼                                                 │
┌─────────────────────┐                                      │
│ IN RESPONSE TO      │                                      │
│ USER'S SELECTION OF │2723                                  │
│ A STOCK CHECK STATUS│                                      │
│ BEING DISPLAYED,    │                                      │
│ DISPLAY THE STOCK   │                                      │
│ CHECK RESULTS FOR   │                                      │
│ THAT PARTICULAR JOB │                                      │
└──────────┬──────────┘                                      │
           ▼                                                 │
┌─────────────────────┐              2791                    │
│ IN RESPONSE TO      │            ┌───────┐                 │
│ USER'S SELECTION OF │2725        │  END  │◄────────────────┘
│ ESTIMATE STATUS     │───────────►└───────┘
│ BEING DISPLAYED,    │
│ PERFORM THE ESTIMATE│
│ FUNCTION FOR THE JOB│
│ SELECTED            │
└─────────────────────┘
```

FIG. 27

2801

OPEN JOBS STATUS Welcome to RapidAutoNet.com! Below you will find the status of all pending items that are currently open for your account. You may review and act upon each item accordingly.

2803

COMPLETED JOBS *i*NFO

2807

NEW! There Are 3 New Vendors

Action	Job Name / Desc	Vendor	Order #	Status	Communication
○	●	○	○	○	Change View

Action	Job Name / Desc	Vendor	Order #	Status	Communication
	Buick Exhaust 1986 Olds 88 Tech: Fred	Federated 2809	958064 2811	ORDER ACCEPTED 7/23/98 7:43am	⚡Page
		Valley	985060	ORDER DELIVERED 7/23/98 7:43am RETURN APPROVED	⚡Page
2815 Cancel Job	Fan Replacement 1987 Pontiac Grand Am			CATALOG 2819 8/7/98 10:11am	
	Harrison's Brakes 1987 Pontiac Grand Am Tech: Fred	Parts Warehouse	984987	ORD.ER DELIVERED 7/25/98 9:03am RETURN APPROVED	✉ READ 2835
	Jane's Water Pump 1990 Chevrolet Camaro Tech: Jim	Valley	984805	ORDER DELIVERED 7/23/98 9:13am RETURN PICKED UP	⚡Page
Cancel Job	Mary's Brake Job 1990 Chevrolet Camaro			STOCK CHECK 2823 7/25/98 8:13am	
	Mary's Water Pump 1990 Chevrolet Camaro Tech: Jim	Valley	984721	ORDER SENT 8/1/98 8:31am	⚡Page
Cancel Job	Bill Manter Brakes & Belts 1996 Buick Skylark Tech: Arnold	Parts Warehouse	984689	ORDER IN PROCESS 7/25/98 8:13am	⚡Page
		Chestown	984666	ORDER IN PROCESS 7/25/98 8:13am	⚡Page
2817 Cancel Order	Jim's Camaro 1990 Chevrolet Camero Tech: Jim	Valley	984721	ORDER NOT VERIFIED 8/1/98 8:31am	⚡Page
Cancel Order	Betsy's Camaro 1990 Chevrolet Camaro Tech: Jake	Valley		ESTIMATE 2829 8/2/98 11:10am	⚡Page

A Maximum number of 25 Closed Jobs can appear on the screen at any given moment.

| Previous 25 Jobs | Next 25 Jobs |

FIG. 28A

Federated

Contact Person	Billy Williams
Address	8776 W. Chester Blvd.
City	Sacramento
State	CA
Zipcode	95887
Telephone	916-345-9987
Fax	916-987-4776
Email	BWilliams@Internet5.com
Business Hours	Monday-Friday 8:00am-5:00pm
	Saturday: 10:00am-3:00pm
Holiday Hours	New Years Day - Closed
	Lincoln's B-Day - 8:00am-5:00pm
	July 4th - Closed
	Memorial Day - Closed
	Veterans Day - Closed
	Thanksgiving Day - Closed
	Christmas Day - Closed
Supplier Type	Wholesale Distributor
Franchise Affiliation	NAPA
Corporate Affiliation	None
Comments	We stock over 700 unique parts from AC Delco, Motorcraft and Mopar.
Delivery Offered	Hot Shot, Scheduled
Terms & Conditions	View Terms
Manufacturer /Lines	View List
Delivery Route(s)	View Route(s)

| Return To Previous Page | Add Vendor To Profile |

FIG. 28B

ORDER STATUS   Order #: 985064   Vendor: Federated   **i**NFO

Action	Item Description	Stock Check Status		Order Status			Return Status			Core
		Catalog	Stock Check	Sent	Accepted	Shipped	Delivered	Request	Approval	Picked-Up	Picked-Up

| Return Auth | P/N: 39943E Catalytic Converter | 7/23/98 7:00am | 7/23/98 7:06am | 7/23/98 7:43am | 7/23/98 8:03am | 7/23/98 8:33am | | | |

Comments: Here you will find comments that have been transmitted from the Purchaser to the Vendor. Each line item may have individual comments displayed.

[Return To Status]

FIG. 28C

Order #: 985060   Vendor: Valley   **i**NFO

Action	Item Description	Stock Check Status		Order Status				Return Status			Core
		Catalog	Stock Check	Sent	Accepted	Shipped	Delivered	Request	Approval	Picked-Up	Picked-Up
	P/N: 39943E Tail Pipe	7/23/98 7:00am	7/23/98 7:06am	7/23/98 7:43am	8:03am	8:43am	9:03am	7/30/98 8:13am	7/30/98 8:31am		

Comments: Here you will find comments that have been transmitted from the Purchaser to the Vendor. Each line item may have individual comments displayed.

[Return To Status]

FIG. 29

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You Wish To Close This Job: *i*NFO

{Job Name Here}
{Year Make Model Here}
{Tech Here}
{Status Here}

Yes - Close Job   No - Job Remains Open

FIG. 30

ESTIMATE: { Purchaser Business Name Here}
{Purchaser Address Here}
{Purchaser City, State, Zipcode Here}
{Purchaser Phone Here}

Automobile: 1990 Chevrolet Camaro - V8 3.5L

Customer Name

Address

City

State

Zipcode

Phone#

Part#	Part Description	Qty Req'd	Price /Rate	Total	Delete
K060945	Gates - Serpentine Belt - Green Stripe	1	$21.95	$21.95	
228-2064	Perfect Circle - Water Pump New	1	$25.95	$25.95	
CORE	"A Core Ticket - Perfect Circle - Water Pump New *This change appears in lieu of a core being returned.*	1	$4.95	$4.95	
BD61445	Wagner - F Rotor Wheel Nut	1	$40.97	$40.97	
A6429	Auto Temp - Electric Cool Fan Switch	1	$14.89	$14.89	
	Labor Cost				

[Back To The Order]   [Calculate Estimate]

FIG. 31

OPEN JOBS STATUS   Welcome to RapidAutoNet.com! Below you will find COMPLETED **INFO**
the status of all "closed jobs". The first twenty five   JOBS
jobs, from the newest to oldest, are displayed as a
default view.

| COMPLETED JOBS VIEW: | ● By Job | ○ By Tech | ○ By Vehicle | ○ By Date | | |

Action	Job Name / Desc	Vendor	Order#	Status	Message
Add Parts	Bill Smith's Tuneup 1990 Chevrolet Camaro V8-305 5.0L VIN F Tech: Fred	Parts Warehouse	975064	COMPLETED 7/22/98 7:43am	
Add Parts	Front Bearing Replacement 1990 Chevrolet Camaro V8-305 5.0L VIN F Tech: Fred	Parts Warehouse	975001	COMPLETED 7/19/98 10:11am	'
Add Parts	Air Conditioning Recall 1990 Chevrolet Camaro V8-305 5.0L VIN F Tech: James	Valley	974933	COMPLETED 7/18/98 9:43am	
Re-Open	Front Bearing Replacement 1992 Toyota Tercel Tech: Fred	Valley	975001	CANCELLED 7/7/98 10:11am	

A maximum number of 25 Closed Jobs can appear on the screen at any given moment.

|Previous 25 Jobs|Next 25 Jobs|

FIG. 32

Vendor: Valley

iNFO

Action	Item Description	Stock Check Status		Order Status				Return Status			Core
		Catalog	Stock Check	Sent	Accepted	Shipped	Delivered	Request	Approval	Picked-Up	Picked-Up
Cancel	P/N: 9885WP Water Pump New	7/23/98 7:00am	7/23/98 7:06am	7/23/98 12:54pm							

COMMENTS: Here you will find comments that have been transmitted from the Purchaser to the Vendor. Each line item may have individual comments displayed.

P/N: 84322SB Serpentine Belt   7/23/98 7:00am   7/23/98 7:06am   7/23/98 12:54pm

COMMENTS: Here you will find comments that have been transmitted from the Purchaser to the Vendor. Each line item may have individual comments displayed.

Return To Status

FIG. 33

Return Authorization Request Summary

You have selected the following part for return to Federated.

Tech P.O. #	Part Desc	Price Ea	Qty Ordered	Qty To Return	Reason for Return	Delivery
Fred 12345	P/N: 39943E Catalytic Converter	$129.95	1	1	Wrong Part Defective Part Customer Cancelled Other (Describe Below)	7/23/98 7:13am

◀ ▶

Send Return Authorization Request

FIG. 34

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START 3501

IN RESPONSE TO USER'S REQUEST FOR DETAILED STATUS INFO, RETRIEVE STATUS INFO FOR EACH PART ITEM ON THE ORDER 3505

DETERMINE THE CURRENT STATUS OF A PART ITEM ON THE ORDER 3509

IS USER ALLOWED TO SUBMIT CANCEL REQUEST? 3513 — YES → INDICATE THAT THE USER IS ALLOWED TO SUBMIT CANCEL REQUEST 3517

NO

IS USER ALLOWED TO SUBMIT RETURN REQUEST 3521 — YES → INDICATE THAT THE USER IS ALLOWED TO SUBMIT RETURN REQUEST 3525

NO

ANY MORE PART ITEM ON THE ORDER? 3529 — YES

NO

DISPLAY DETAILED STATUS HISTORY FOR EACH PART ITEM ON THE ORDER 3533 → IN RESPONSE TO USER'S SELECTION TO CANCEL, PERFORM CANCELLATION FUNCTION 3537 → IN RESPONSE TO USER'S SELECTION TO RETURN, DISPLAY RETURN AUTH. REQUEST SUMMARY 3541 → IN RESPONSE TO USER'S REQUEST, PERFORM RETURN FUNCTION 3545

END 3591

FIG. 35

3601 CANCELLATION PROCESSING

3611 MARKET SERVER RECEIVES A CANCELLATION REQUEST FROM THE USER

3615 MARKET SERVER UPDATES TXN DB WITH A NEW CANCELLATION REQUEST

3617 MARKET SERVER WAITS FOR CANCELLATION CONFIRMATION

3619 CANCELLATION CONFIRMATION IN TXN DB? — NO / YES

3621 MARKET SERVER RETRIEVES CANCELLATION CONFIRMATION FROM TXN DB AND DISPLAYS TO USER

DB CONVERTER SCANS TXN DB FOR NEW CANCELLATION REQUEST

3641 / **3643** NEW CANCELLATION REQUEST FOUND? — NO / YES

3645 DB CONVERTER UPDATES ORDER ENTRY IN MESSAGE DB, SET MSG TYPE TO CANREQ, UPDATES REQUESTITEM ENTRY FOR EACH PART ITEM TO BE CANCELLED, SETS MSGTYPE TO CANREQ

3649 DB CONVERTER SCANS MESSAGE DB FOR CANCELLATION CONFIRMATION (SELECT ENTRIES WITH MSG TYPE = CANRESP)

3651 CANCELLATION CONFIRMATION FOUND IN MESSAGE DB? — NO / YES

3653 DB CONVERTER UPDATES TXN DB WITH CANCELLATION CONFIRMATION INFO, SETS MSG TYPE OF THE CORRESPONDING ORDER ENTRY AND REQUEST ITEMS ENTRIES TO CANUPDT

VENDOR SYSTEM INTERFACE (VSI) SCANS MESSAGE DB FOR NEW CANCELLATION REQUEST (SELECT ORDER ROWS AND REQUESTITEM ROWS WITH MSG TYPE = CANREQ)

3661 / **3663** NEW CANCELLATION REQUEST FOUND? — NO / YES

3665 VSI SUBMITS NEW CANCELLATION REQUEST TO VENDOR SYSTEM

3667 VSI RECEIVES CANCELLATION CONFIRMATION INFO FROM VENDOR SYSTEM

3669 VSI UPDATES MESSAGE DB WITH CANCELLATION CONFIRMATION INFO, SETS MSG TYPE OF CORRESPONDING ORDER AND REQUESTITEM ENTRIES TO CANRESP

FIG. 36

FIG. 37

```
                    ┌─────────────┐ ╭─3801
                    │    START    │╱
                    └──────┬──────┘
                           │                          ╭─3805
        ┌──────────────────▼──────────────────┐╱
        │ IN RESPONSE TO THE USER'S REQUEST, RETRIEVE ORDER │
        │ INFORMATION FROM THE TXN DB AND PREPARE A         │
        │ SUMMARY LIST OF DELIVERY/CORE/RETURN STATUS       │
        └──────────────────┬──────────────────┘
                           │                          ╭─3809
        ┌──────────────────▼──────────────────┐╱
        │                                     │
        │   DISPLAY THE SUMMARY LIST TO THE USER │
        │                                     │
        └──────────────────┬──────────────────┘
                           │                          ╭─3813
        ┌──────────────────▼──────────────────┐╱
        │ IN RESPONSE TO THE USER'S SELECTION OF A │
        │ VENDOR BEING DISPLAYED IN THE SUMMARY LIST, │
        │ DISPLAY A PICKUP/DELIVERY USER INTERFACE │
        │ SHOWING A LIST OF INDIVIDUAL PART ITEMS │
        │ ORDERED FROM THE VENDOR SELECTED │
        └──────────────────┬──────────────────┘
                           │                          ╭─3817
        ┌──────────────────▼──────────────────┐╱
        │ ALLOW THE USER TO INDICATE WHICH PART ITEMS │
        │ ON THE LIST HAVE BEEN RECEIVED │
        └──────────────────┬──────────────────┘
                           │                          ╭─3821
        ┌──────────────────▼──────────────────┐╱
        │ ALLOW THE USER TO INDICATE, IF THERE ARE │
        │ CORES TO BE RETURNED, WHETHER A CORE FOR A │
        │ PARTICULAR PART ITEM HAS BEEN RETURNED │
        └──────────────────┬──────────────────┘
                           │                          ╭─3825
        ┌──────────────────▼──────────────────┐╱
        │ ALLOW THE USER TO INDICATE, IF THERE ARE PART │
        │ ITEMS TO BE RETURNED, WHETHER ANY │
        │ PARTICULAR PART HAS BEEN RETURNED │
        └──────────────────┬──────────────────┘
                           │                          ╭─3829
        ┌──────────────────▼──────────────────┐╱
        │ UPDATE THE TXN DB TO REFLECT THE DELIVERY/ │
        │ CORE RETURN/PART RETURN STATUS BASED UPON │
        │ THE USER'S SELECTIONS │
        └──────────────────┬──────────────────┘
                           │            ╭─3891
                    ┌──────▼──────┐╱
                    │     END     │
                    └─────────────┘
```

FIG. 38

Delivery / Core / Returns Status

*i*NFO

Click On A Vendor To View / Update Delivery or Pick-up Status.

Vendor	Job Name	Order	Transaction Type	Status
Parts Warehouse	1990 Chevrolet Camaro	123456	Merchandise - 2 Cores	NEW
	Harrison's Brakes	984987	Merchandise - 2 Cores	NEW
Chesrown	1990 Chevrolet Camaro	123568	Merchandise - 1 Cores	NEW
Federated	Buick Exhaust	985064	Merchandise - 2 Cores	
Valley	Buick Exhaust	985060	Merchandise - 2 Cores	
	Jane's Water Pump	984721	Merchandise - 2 Cores	

FIG. 39A

Chesrown Pickup / Delivery Summary — *i*NFO

Orders

Job Name	Tech	Vehicle	Order #	Date	QTY	PN	Desc	Price Each	Days Open	Comments Rec'd
1990 Chevrolet Camaro	Jim	1990 Chevrolet Camaro V8-5.0L	123578	7/24/98	1	452311-1	Chevrolet OE - Serpentine Belt	$26.25		Read
				7/24/98	1	452-1-45	Chevrolet OE - Water Pump New	$38.25		...
				7/24/98	1	5332-393	Chevrolet OE - Cooling Fan Switch	$20.05		...
				7/24/98	1	A6429	Chevrolet OE - F Semi-Metalic Pad	$48.60		...

Return To The Delivery Screen

Cores

Job Name	Tech	Vehicle	Order #	Date	QTY	Part Description	Authorization	Amt	Days Open	Comments Returned
1990 Chevrolet Camaro	Jim	1990 Chevrolet Camero V8-5.0L	123578	7/24/98	1	Chevrolet OE - Water Pump New	CH2330	$4.95	0	...
						TOTAL VALUE OF OPEN CORES		$4.95		

Return To The Delivery Screen

RETURNS

Jobs Name	Tech	Vehicle	Order #	Date	QTY	Part Description	REASON FOR RETURN	Authorization	Amt	Days Open	Comments Returned

Return To The Delivery Screen

Update

FIG. 39B

START 4001

IN RESPONSE TO USER'S REQUEST, ALLOW
THE USER TO SELECT A REPORT TYPE 4005

WHICH REPORT
TYPE SELECTED? 4009 — CUSTOM → ALLOW THE USER TO
DOWNLOAD DATA FROM
THE SYSTEM TO CREATE
CUSTOMIZED REPORTS 4013

STANDARD

DISPLAY A MONTHLY VENDOR
TRANSACTION REPORT 4017

IN RESPONSE TO THE USER'S SELECTION
OF A VENDOR BEING DISPLAYED, DISPLAY
A WEEKLY VENDOR TRANSACTION REPORT 4021

IN RESPONSE TO THE USER'S SELECTION
OF A WEEKLY PERIOD BEING DISPLAYED,
DISPLAY A DAILY VENDOR TRANSACTION
REPORT 4025

IN RESPONSE TO THE USER'S SELECTION
OF A SPECIFIC DAY, DISPLAY A SINGLE
DAY TRANSACTION REPORT 4027

IN RESPONSE TO THE USER'S SELECTION
OF A TRANSACTION BEING DISPLAYED,
DISPLAY A TRANSACTION SUMMARY
REPORT 4029

END 4091

FIG. 40

FIG. 41A

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MONTHLY VENDOR TRANSACTION ANALYSIS
≤November 1998≥

Vendor	# Of Orders	Purchase $	Return $	Net Of Return $	Avg. Order $
ABC Distributing	22	$17,234.27	$347.21	$16,887.06	$767.59
Bennett Brothers	7	$923.55	$39.45	$884.10	$126.30
CarQuest	6	$1,232.89	$0.00	$1,232.89	$205.48
Davenport, Inc.	5	$434.78	$12.87	$421.91	$84.38
Napa Sacramento	5	$1,645.33	$112.43	$1,532.90	$306.58
Parts Xpress	2	$317.44	$0.00	$317.44	$158.72
World Parts	1	$39.97		$39.97	$39.97
TOTALS	48	$21,828.23	$511.96	$21,316.27	$444.09

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FIG. 41B

MONTHLY VENDOR TRANSACTION ANALYSIS BY WEEK
ABC Distributing - November 1998

Vendor	Week/Date	# Of Orders	Purchase $	Return $	Net Of Return $	Avg. Order $
ABC Distributing	11/1/98 - 11/7/98	6	$7,234.27	$147.21	$7,087.06	$1,181.1ε
	11/8/98 - 11/14/98	9	$8,932.55	$200.00	$8,732.55	$992.51
	11/15/98 - 11/21/98	3	$232.89	$0.00	$232.89	$232.89
	11/22/98 - 11/28/98	3	$434.78	$0.00	$434.78	$434.78
	11/29/98 - 11/30/98	1	$399.78	$0.00	$399.78	$399.78
TOTALS		22	$17,234.27	$347.21	$16,887.06	$767.59

|Reports Menu |Previous Report|

FIG. 41C

WEEKLY VENDOR TRANSACTION ANALYSIS BY OF WEEK
ABC Distributing - November 1998

Vendor	Week/Date	# Of Orders	Purchase $	Return $	Net Of Return $	Avg. Order $
ABC Distributing	11/1/98 - Monday	2	$3,217.87	$0.00	$3,217.87	$3,217.87
	11/2/98 - Tuesday	1	$0.00	$147.21	$-147.21	$-147.21
	11/3/98 - Wednesday	1	$1,232.89	$0.00	$1,232.89	$1,232.89
	11/4/98 - Thursday	0	$0.00	$0.00	$0.00	$0.00
	11/5/98 - Friday	1	$1,909.81	$0.00	$1,909.81	$1,909.81
	11/6/98 - Saturday	1	$499.90	$0.00	$449.90	$449.90
	11/7/98 - Sunday	1	$423.80	$0.00	$423.80	$423.80
TOTALS		6	$7,234.27	$147.21	$7,087.06	$1,181.1£

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FIG. 41D

DAILY VENDOR TRANSACTION ANALYSIS BY SINGLE DAY
ABC Distributing - November 1998

Vendor	Day Of Week	Trans #	Purchase $	Return $	Net Of Return $	Avg. Order $
ABC Distributing	11/1/98	98111702	$1,503.42	$0.00	$1,503.42	
		98111903	$1,714.45	$0.00	$1,714.45	
TOTALS			$3,217.87	$0.00	$3,217.87	$1,608.94

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FIG. 41E

Purchaser Order Summary Report
Ordered From: ABC Auto Parts
Vendor Invoice #: 01977
Date: November 1, 1998 - Time: 7:42am

Order #	Part #	Qty	Part Desc	Part Cost	Total
9811702	AE2122	2	Raybestos F Rotor - New	$69.98	$139.96
	AE2245	2	Raybestos F Caliper - New	$28.87	$57.74
	AE2309	2	Raybestos F Metalic - New	$9.98	$19.96
	2444	2	Raybestos R Caliper - New	$28.87	$57.74
	AE2593	10	Raybestos Wheel Rotor Bolts	$1.98	$19.80
Order Total					$295.20

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FIG. 41F

4201

START

4205

IN RESPONSE TO THE USER'S REQUEST,
DISPLAY STATUS SUMMARY OF PENDING
TRANSACTIONS AND ACTIVITIES BASED
UPON INFORMATION RETRIEVED FROM THE
TXN DB

4209

IN RESPONSE TO THE USER'S SELECTION
OF A SPECIFIC ORDER TXN IN THE
SUMMARY LIST, DISPLAY AN ORDER
SUMMARY UI TO ALLOW THE USER TO
REVIEW AND APPROVE THE ORDER

4213

IN RESPONSE TO THE USER'S SELECTION
OF A SPECIFIC STOCK CHECK TXN IN THE
SUMMARY LIST, DISPLAY A STOCK CHECK
SUMMARY UI TO ALLOW THE USER TO
REVIEW AND UPDATE THE STOCK CHECK

4217

IN RESPONSE TO THE USER'S SELECTION
OF A SPECIFIC RETURN TXN IN THE
SUMMARY LIST, DISPLAY A RETURN
AUTHORIZATION REQUEST UI TO ALLOW
THE USER TO REVIEW AND APPROVE OR
DECLINE THE RETURN REQUEST

4291

END

FIG. 42

"PENDING" ITEMS ACTIVITY STATUS **i**NFO

TRANSACTIONS REQUIRING INTERACTION

ORDERS	Options	Purchaser	Account #	Trans #	Status	Communication	TODAY'S ACTIVITY 27 FOR $12,073.21
		Brake Masters	3992843	983948	Inadequate Stock	⚡Page	
		Goodyear Sacramento #234	4993849	964987	Comment Attached	⚡Page	
		Brake Masters	3992843	983948	Immediate Delivery Requested	⚡Page	
		Auto Repair Express	5963849	984987	Verify Order Before Shipping	⚡Page	

STOCK CHECKS	Options	Purchaser	Account #	Trans #	Status	Communication	42 FOR $21,733.51
		Valley Automotive	0112345	985064	Inadequate Stock	⚡Page	
		Goodyear Sacramento #234	4993849	984987	Manual Approved Required	⚡Page	
		Al's Automotive	0123992	985222	Invalid Part	⚡Page	

RETURNS	Options	Purchaser	Account #	Trans #	Status	Communication	2 For $273.44
		Brake Masters	3992843	12345	Requested	⚡Page	
		Goodyear Sacramento #234	4993849	984987	Requested	⚡Page	

An Example Of When The <u>Vendor Gateway Is Down</u>

FIG. 43A

Brake Masters Order Summary
1990 Chevrolet Camaro V8-5.0L

*i*NFO

Contact	Order #	Date	Qty Ordered	Qty Avail	Qty To Ship	Part #	Part Description	Price Each	Ext. Price	Comments
Steve	984666	7/24/98	1	1	1	452311-1	Chevrolet OE - Serpentine Belt	$26.25	$26.25	
			1	1	1	452-1-45	Chevrolet OE - Water Pump New	$38.25	$38.25	Comment
							*A Core Ticket Of $4.95 Applies To the Chevrolet OE - Water Pump New			
			1	1	1	5332-393	Chevrolet OE - Cooling Fan Switch	$20.05	$20.05	Comment
			1	1	1	39978	Chevrolet OE - F Semi-Metalic Pad	$48.60	$48.60	
							SUB-TOTAL		$133.15	
							SALES TAX		$.00	
							SHIPPING / DELIVERY		$.00	IMMEDIATELY
							TOTAL		$133.15	

Approve   Decline

Return To Status Screen

FIG. 43B

*i*NFO

Valley Automotive Stock Check Summary
1990 Chevrolet Camaro V8-5.0L
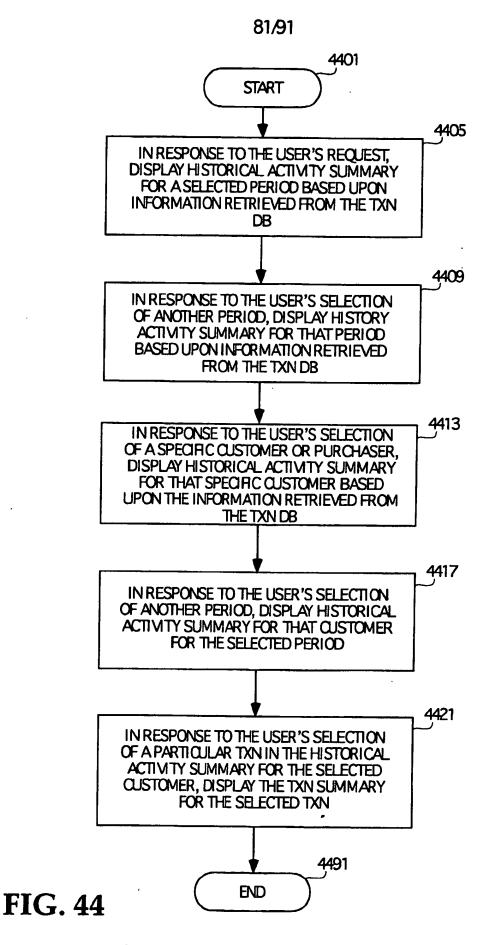
Contact	Transaction #	Date	Qty Ordered	Qty Avail	Part #	Part Description	Price Each	Action
Jim	123456	7/24/98	1	1	141603	Bendix - F Brake Rotor - RPO Code 1LE	123.26	
			1	1	K060945	Gates - Serpentine Belt - Green Stripe	21.95	
			1	1	228-2064	Perfect circle - Water Pump New	25.95	
			1	1	A6429	Auto Temp - Electric Cool Fan Switch	4.97	
			10	5	BD61445	Wagner - F Rotor Wheel Nut Inadequate Stock	4.97	
								Update

Return To The Status Screen

FIG. 43C

Brake Masters Return Authorization Request

iNFO

Contact	Transaction #	Date	Qty Ordered	Qty To Return	Part #	Part Description	Price Each	Reason For Return	Action
Fred	12345	7/24/98	1	1	39943E	Wagner - Front Caliper Set	$39.95	Wrong Part	Approve Decline

Return Authorization Number:

Update

Return To The Status Screen

FIG. 43D

START — 4401

↓

IN RESPONSE TO THE USER'S REQUEST,
DISPLAY HISTORICAL ACTIVITY SUMMARY
FOR A SELECTED PERIOD BASED UPON
INFORMATION RETRIEVED FROM THE TXN
DB — 4405

↓

IN RESPONSE TO THE USER'S SELECTION
OF ANOTHER PERIOD, DISPLAY HISTORY
ACTIVITY SUMMARY FOR THAT PERIOD
BASED UPON INFORMATION RETRIEVED
FROM THE TXN DB — 4409

↓

IN RESPONSE TO THE USER'S SELECTION
OF A SPECIFIC CUSTOMER OR PURCHASER,
DISPLAY HISTORICAL ACTIVITY SUMMARY
FOR THAT SPECIFIC CUSTOMER BASED
UPON THE INFORMATION RETRIEVED FROM
THE TXN DB — 4413

↓

IN RESPONSE TO THE USER'S SELECTION
OF ANOTHER PERIOD, DISPLAY HISTORICAL
ACTIVITY SUMMARY FOR THAT CUSTOMER
FOR THE SELECTED PERIOD — 4417

↓

IN RESPONSE TO THE USER'S SELECTION
OF A PARTICULAR TXN IN THE HISTORICAL
ACTIVITY SUMMARY FOR THE SELECTED
CUSTOMER, DISPLAY THE TXN SUMMARY
FOR THE SELECTED TXN — 4421

↓

END — 4491

FIG. 44

HISTORICAL ACTIVITY For TODAY   **ℹNFO**

Customer Name	Orders / Value	Stock Checks	Returns	Status	View Status For:
Brake Masters	37 for $12,078.33	Count 7	Count 2		
Goodyear Sacramento #234	5 for $1,227.50	Count 9	Count 3		[Today ▼]
Bob's Auto Supply	1 for $178.23	Count 2	Count 1		[Change View]
CarQuest Sacramento #127	9 for $3,127.10	Count 27	Count 2		

FIG. 45A
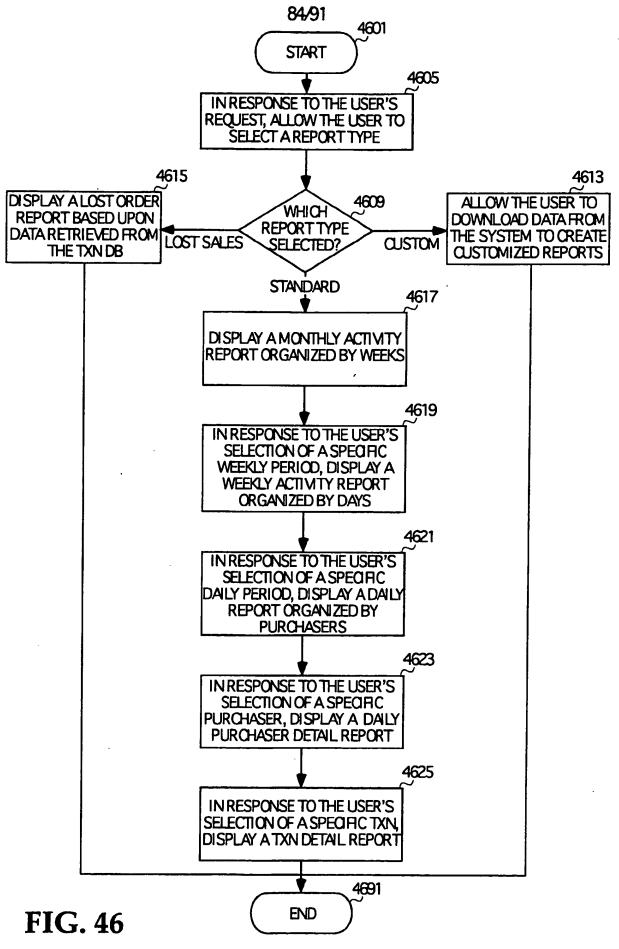
HISTORICAL ACTIVITY For Brake Masters   **ℹNFO**

Customer Name	Account #	Date / Time	Type	Trans #	Status	View
Brake Masters	3992843	07/23/98 12:23pm	Order	973974	Fulfilled	[Today ▼]
		07/23/98 11:45pm	Order	964844	Delivery Completed	[Change View]
		07/22/98 10:17pm	Stock Check	9987652	Fulfilled	
		07/21/98 1:13pm	Return	9455432	Authorized	
		07/24/98 10:22pm	Order	979712	Fulfilled	
		07/24/98 9:12pm	Stock Check	9673662	Fulfilled	
Back To History Screen		07/23/98 11:52pm	Return	8993231	Returned	

FIG. 45B

TRANSACTION SUMMARY For Brake Masters - Order#: 973974
Order Fulfilled: July 23rd, 1998

*i*NFO

Contact	Order #	Date	Qty Ordered	Qty Avail	Qty To Ship	Part #	Part Description	Price Each	Ext. Price	Comments
Jim	123456	7/24/98	1	1	1	141603	Bendix - F Brake Rotor - RPO Code 1LE	$123.26	$123.26	Comment
			1	1	1	K060945	Gates - Serpentine Belt - Green Stripe	$21.95	$21.95	
			1	1	1	228-2064	Perfect Circle - Water Pump New	$25.95	$25.95	
			1	1	1	A6429	Auto Temp. - Electric Cool Fan Switch	$14.89	$14.89	Comment
			10	10	10	BD61445	Wagner - F Rotor Wheel Nut	$4.97	$24.85	
					SUB-TOTAL				$210.90	
					SALES TAX				$16.34	
					SHIPPING / DELIVERY				$.00	
					TOTAL				$227.24	Continue

Return To Status Screen

FIG. 45C

84/91

START `4601`

IN RESPONSE TO THE USER'S REQUEST, ALLOW THE USER TO SELECT A REPORT TYPE `4605`

DISPLAY A LOST ORDER REPORT BASED UPON DATA RETRIEVED FROM THE TXN DB `4615`

WHICH REPORT TYPE SELECTED? `4609`

LOST SALES

CUSTOM

ALLOW THE USER TO DOWNLOAD DATA FROM THE SYSTEM TO CREATE CUSTOMIZED REPORTS `4613`

STANDARD

DISPLAY A MONTHLY ACTIVITY REPORT ORGANIZED BY WEEKS `4617`

IN RESPONSE TO THE USER'S SELECTION OF A SPECIFIC WEEKLY PERIOD, DISPLAY A WEEKLY ACTIVITY REPORT ORGANIZED BY DAYS `4619`

IN RESPONSE TO THE USER'S SELECTION OF A SPECIFIC DAILY PERIOD, DISPLAY A DAILY REPORT ORGANIZED BY PURCHASERS `4621`

IN RESPONSE TO THE USER'S SELECTION OF A SPECIFIC PURCHASER, DISPLAY A DAILY PURCHASER DETAIL REPORT `4623`

IN RESPONSE TO THE USER'S SELECTION OF A SPECIFIC TXN, DISPLAY A TXN DETAIL REPORT `4625`

END `4691`

FIG. 46

RapidAutoNet Vendors Home Page - Microsoft Internet Explorer

File   Edit   View   Go   Favorites   Help

Back   Forward   Stop   Refresh   Home   Search   Favorites   History   Channels   Fullscreen   Mail   Print   Edit

Address   C:\My Documents\Clients\004080-RapidNet\RAN2\new mockup\main\Vtrmainpg.htm   Links

STATUS   HISTORY   CUSTOMERS   SETUP   REPORTS   LOG OUT   SUPPORT

VENDOR REPORTS OPTIONS

REPORT NAME	REPORT DESCRIPTION
Billing Verification Report	A report that allows you to display billing detail to assist you in reconciling your RapidAutoNet invoices.
Lost Sales Report	A summary report that displays Stock Check Request, Order and Lost Order detail that will help you fine tune your RapidAutoNet business strategies.
Custom Reporting	Download data from RapidAutoNet system and create your own customized reports!

Done   My Computer

FIG. 47A

ABC Auto Parts - Year-To-Date Lost Order Report

Month	Total Stock Checks	Unfulfilled Stock Checks	Total Orders	Value	Lost Orders	Value	Lost Order %	TREND - 100%
January	1,274	651	623	$40,495.00	227	$14,755.00	26.71%	
February	1388	643	745	$48,425.00	303	$19,695.00	28.91%	
March	1176	469	707	$45,955.00	312	$20,280.00	30.62%	
April	1385	758	627	$40,755.00	278	$18,070.00	30.72%	
May	2103	1,110	993	$64,545.00	198	$12,870.00	16.62%	
June	998	497	501	$32,565.00	144	$9,360.00	22.33%	
July	1176	617	559	$36,335.00	321	$20,865.00	36.48%	
August	1453	830	623	$40,495.00	249	$16,185.00	28.56%	
September	1234	535	699	$45,435.00	261	$16,965.00	27.19%	
October	1102	507	595	$38,675.00	210	$13,650.00	26.09%	
November	1187	575	612	$39,780.00	334	$21,710.00	35.31%	
December	1455	677	778	$50,570.00	502	$32,630.00	39.22%	
YTD TOTALS	15,931	7,869	8,062	$524,030.00	502	$217,035.00	29.29%	

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REPORT KEY:

The Year-To-Date Order Report gives a vendor an idea of how many times their Legacy System was querie Check Transactions, Orders placed with the Vendor, Total Stock Checks that were NOT converted to orders, and that were ordered from other vendors.

The following terms describe this report and its associated variables and calculations.

TOTAL STOCK CHECKS

This column displays the total number of Stock Checks performed on the Vendor's Legacy System for the month YTD Total (bottom line) shows the total number of Stock Checks for the Year-To-Date.

UNFULFILLED STOCK CHECKS

The total number of Stock Checks received by the Vendor, for which no order was placed with the Vendor. The YTD (bottom line) shows the total Year-To-Date.

TOTAL ORDERS

The total number of orders placed by RANet into the Vendor's Legacy System for each month. The YTD Total (bottom line) shows the total Year-To-Date.

TOTAL ORDERS VALUE

The value of all orders placed by RANet into the Vendor's Legacy System for each month. The YTD Total (bottom line) shows the total Year-To-Date.

LOST ORDERS

The total number of Stock Checks for which a purchaser Ordered from another vendor. The YTD Total (bottom line) shows the total Year-To-Date.

LOST ORDERS VALUE

The value of all Lost Orders for each month. The YTD Total (bottom line) shows the total Year-To-Date.

LOST ORDERS %

FIG. 47B

ABC Auto Parts - Activity Summary Report by Week

November 1998

Week	Sun	Mon	Tues	Wed	Thurs	Fri	Sat	Total Parts Ordered	Total Gross Orders	Total Returns	Total Net Of Returns	Average Part Order	Total Transaction Fee
1	1	2	3	4	5	6	7	12	$586.00	$87.00	$499.00	$166.33	$9.98
2	8	9	10	11	12	13	14	12	$586.00	$87.00	$499.00	$166.33	$9.98
3	15	16	17	18	19	20	21	12	$586.00	$87.00	$499.00	$166.33	$9.98
4	22	23	24	25	26	27	28	12	$586.00	$87.00	$499.00	$166.33	$9.98
5	29	30	1	2	3	4	5	12	$586.00	$87.00	$499.00	$166.33	$9.98

Summary Totals

| Return To The Vendor Reports Page |

FIG. 47C

Weekly Billing Report - Daily Summary

ABC Auto Parts - Daily Summary for the week ending November 7th, 1998

Vendor Name	Date	Day	# Of Repair Shops Ordering	# Of Orders	Total Parts Ordered	Total Gross Orders	Total Returns	Total Net of Returns	Average Part Order	Total Transaction Fee	Average Transaction Fee
ABC Auto Parts	November 1	Monday	20	400	1,200	$25,860.00	$5,987.21	$19,872.79	$49.68	$397.46	$0.99
	November 2	Tuesday	19	380	1,140	$27,227.00	$6,875.32	$20,351.68	$53.56	$407.03	$1.07
	November 3	Wednesday	25	500	1,500	$34,825.00	$8,752.91	$26,072.09	$52.14	$521.44	$1.04
	November 4	Thursday	24	480	1,440	$31,027.20	$4,583.77	$26,443.43	$55.09	$528.87	$1.10
	November 5	Friday	26	520	1,560	$34,658.00	$7,485.65	$27,172.35	$52.25	$543.45	$1.05
	November 6	Saturday	32	640	1,920	$38,176.00	$10,245.31	$27,930.69	$43.64	$558.61	$0.87
	November 7	Sunday	23	460	1,380	$38,479.00	$1,254.32	$37,224.68	$80.92	$744.49	$1.62
Summary Totals			523	3,380	10,140	$230,252.20	$45,184.49	$185,067.71	$55.33	$3,701.35	$1.11

|Return To Activity Summary By Week | Return To The Vendors Reports Page|

FIG. 47D

Weekly Billing Report - Daily Detail

ABC Auto Parts - Purchaser Summary for November 1st, 1998

Vendor Name	Month	Day	Purchaser	Total Parts Ordered	Total Gross Orders	Total Returns	Total Net of Returns	Average Part Order	Total Transaction Fee	Average Transaction Fee
ABC Auto Parts	November	1	Arnold's Auto Repair	12	$586.00	$87.00	$499.00	$166.33	$9.98	$3.33
			Benjamin's Auto Repair	11	$227.00	$75.32	$351.68	$53.56	$7.03	$1.07
			Castle Automotive	15	$34,825.00	$8,752.91	$26,072.09	$52.14	$521.44	$1.04
			Denbu Auto Repair	14	$27.20	$83.77	$43.43	$5.09	$8.87	$1.10
Summary Totals			66	133	424.043	58,117	365,927	$60.33	$7,318.53	$1.21

[Return To Activity Summary By Day | Return To The Vendors Reports Page]

FIG. 47E

Weekly Billing Report – Daily Purchaser Detail
ABC Auto Parts – Purchaser Detail for November 1st, 1998

Vendor Name	Month	Day	Purchaser	Transaction #	Total Parts Ordered	Total Gross Orders	Total Returns	Total Net of Returns	Average Part Order	Total Transaction Fee	Average Transaction Fee
ABC Auto Parts	November	1	Arnold's Auto Repair	01233	12	$586.00	$87.00	$499.00	$166.33	$9.98	$3.33
				02145	11	$227.00	$75.32	$351.68	$53.56	$7.03	$1.07
				02188	15	$34,825.00	$8,752.91	$26,072.09	$52.14	$521.44	$1.04
				02298	14	$27.20	$83.77	$43.43	$5.09	$8.87	$1.10
Summary Totals					133	424,043	58,117	365,927	$60.33	$7,318.53	$1.21

[Return To Daily Report| Return To The Vendors Reports Page]

FIG. 47F

Weekly Billing Report - Order Detail

Order #: 01223 - Invoice#: 01977 - Date: November 1st, 1998

Vendor Name	Repair Shop Name	Order #	Part #	Qty Ordered	Part Desc	Part Cost	Total
ABC Auto Parts	Arnold's Auto Repair	01223	AE2122	2	Raybestos F Rotor - New	$69.98	$139.96
			AE2245	2	Raybestos F Caliper - New	$28.87	$57.74
			AE2309	2	Raybestos F Metallic Pads	$9.98	$19.96
			2444	2	Raybestos R Caliper - New	$28.87	$57.74
			AE2593	10	Raybestos Wheel Rotor Bolts	$1.98	$19.80

Order Total $295.20

Transaction Fee Percentage   x 2.00%

TOTAL TRANSACTION FEE DUE $5.90

|Return To The Daily Purchaser Detail Report|Return To The Vendors Reports Page|

FIG. 47G

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US00/24671

A. CLASSIFICATION OF SUBJECT MATTER
IPC(7) :G06F 17/60
US CL :705/26
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
Minimum documentation searched (classification system followed by classification symbols)
U.S. : 705/8, 22, 26, 27, 28, 29

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Please See Extra Sheet.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Please See Extra Sheet.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,122,403 A (RHOADS) 19 September 2000, the abstract, the background, and the summary of the invention.	1-201
Y	US 5,319,542 A (KING JR.)et al. 07 June 1994, the abstract and the summary of the invention.	1-201
Y	US 5,765,143 A (SHELDON et al.) 09 June 1998, the abstract, the background, and the summary of the invention.	1-201
A	Smothers Parts International, "About us", from http://www.smothers.com/frontpage.html, pp.1-27	1-201

[X]	Further documents are listed in the continuation of Box C.	[ ]	See patent family annex.

*	Special categories of cited documents:
"A"	document defining the general state of the art which is not considered to be of particular relevance
"E"	earlier document published on or after the international filing date
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O"	document referring to an oral disclosure, use, exhibition or other means
"P"	document published prior to the international filing date but later than the priority date claimed

"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&"	document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
08 OCTOBER 2000	28 DEC 2000

Name and mailing address of the ISA/US	Authorized officer
Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231	CUONG H. NGUYEN
Facsimile No. (703) 305-3230	Telephone No. (703) 305-4553

Form PCT/ISA/210 (second sheet) (July 1998)*

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	eParts Exchange, Inc., Welcome to the eParts Exchange Marketplace, from http://www.goepx.com/epx/. pp.1-13, copyright (C) 2000.	1-201
Y,P	From Corporate ResearchNet, Autovia VP interviews on radioWallStreet.com from Internet capital group B2B conference, printed on 08 March 2000, pp.1-2.	1-201
Y,P	From Corporate ResourceNet database, Autovia Update, Automotive Marketing, April 2000, Vol.29, Issue 4, pp.1-2.	1-201
Y,P	From Corporate ResourceNet database, Time is money, and business for Autovia, Automotive Marketing, July 2000, Vol.29 Issue 7, pp.1-2.	1-201
Y	From Corporate ResourceNet database, Internet capital turbochargers Autovia's web efforts, by Anderson from Sacramento Business Journal, 10 September 1999, Vol.16, Issue 26, pp.1-3.	1-201
Y,P	From Corporate ResourceNet database, Autovia accelerates, by Anderson from Sacramento Business Journal, 04 August 2000, Vol.17 Issue 21, pp.1-3.	1-201
Y,P	From Corporate ResourceNet database, Autovia adds 10 new major manufacturer catalogs to its extensive automotive parts network, from Business Wire, 18 July 2000, pp. 1-2.	1=201
Y,P	From Corporate ResourceNet database, Dunn systems and eParts Exchange unveil an E-B2B automotive aftermarket exchange, auction and aggregation E-Commerce site, from PR Newswire, 29 August 2000, pp.1-2.	1-201
Y,P	From Corporate ResearchNet database, Budget adds flex-fuel cars, Automotive News, 17 January 2000, Vol.74 Issue 5857, pp.1-2.	1-201
Y,P	From Corporate ResearchNet, eParts exchange partners with Dunn systems to create an internet B2B automotive aftermarket exchange, auction and aggregation e-commerce site, PR Newswire, 23 March 2000, pp.1-3.	1-201
Y,P	From Corporate ResourceNet, eParts exchange - B2B auto parts ecommerce marketplace relocates to new headquarters, PR Newswire, 17 April 2000, pp.1-2.	1-201
Y,P	From Corporate ResourceNet, eParts exchange unveils new website Exchange, PR Newswire, 10 August 2000, pp.1-2.	1-201

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	From Corporate ResourceNet, Universal automotive announces 15% quarterly sales growth, PR Newswire, 14 August 2000, pp.1-4.	1-201
Y,P	From Corporate ResourceNet database, eParts exhange appoints sales representative agencies, PR Newswire, 05 July 2000, pp.1-2.	1-201
Y,P	From Corporate ResourceNet database, Net to add 2 parts exchanges, Automotive News, 03 April 2000, vol.74 issue 5868, p.1	1-201
Y,P	From Corporate ResourceNet database, AUTOVIA paving a new road for auto parts industry..., Business Wire, 16 March 2000, pp.-3.	1-201
Y,P	From Corporate ResourceNet database, AAIW awash with innovation, by Gallanis of Discount Store News, 22 November 1999, Vol.38 Issue 22, pp.1-4.	1-201
Y,P	From Corporate ResourceNet database, AUTOVIA fills up its tank, by Anderson of Sacramento Business Journal, 29 October 1999, Vol.16 Issue 33, pp.1-4.	1-201
Y	Staten, iCat to do net commerce, Dialog File 148, MacWeek, v10, n17, p18(2), printed 29 April 1996, pp.1-2	1-201

B. FIELDS SEARCHED
Documentation other than minimum documentation that are included in the fields searched:

Microsoft Press Computer Dictionary, 3rd edition.
Van Nostrand's Scientific Encyclopedia, 6th edition.
Downes et al., Dictionary of finance and investment terms, 5th edition, 1998.

B. FIELDS SEARCHED
Electronic data bases consulted (Name of data base and where practicable terms used):

WEST2.0/DERWENT, DIALOG CLASSIC, WORLD-WIDE-WEB
search terms: computer network, facilitate, transaction, vendor, purchaser, request, provide, submit, part, send, storing, updating, database, catalog, distributing, message, creating, stock check, order confirmation, cancelation confirmation, return response, processing status, catalog query, vehicle, specification, subgroup, part component, vehicle model, vehicle year, vehicle engine type, description, manufacturer, identifier, code, part number, sort order, transaction database, convert, terminal, interface, order placement function, match, criteria.